EXHIBIT A

IN THE UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

SYNGENTA CROP PROTECTION, LLC,)	
Plaintiff,)	Civil Action No: 1:15-CV-274
v.)	CONTAINS INFORMATION
)	DESIGNATED BY WILLOWOOD
WILLOWOOD, LLC, WILLOWOOD USA,)	AS
LLC, WILLOWWOOD AZOXYSTROBIN,)	ATTORNEYS' EYES ONLY,
LLC, and WILLOWOOD LIMITED,)	SUBJECT TO
)	PROTECTIVE ORDER
Defendants.)	
)	

EXPERT REPORT OF BENJAMIN S. WILNER, Ph.D.

The Plaintiff, Syngenta Crop Protection, LLC ("Syngenta"), retained Alvarez & Marsal Disputes and Investigations, LLC ("A&M DI") in the above captioned matter. In particular, I, Benjamin S. Wilner, Ph.D., was asked to quantify damages Syngenta suffered as a result of the multiple allegedly improper actions of Willowood, LLC, Willowood USA, LLC, Willowood Azoxystrobin, LLC, and Willowood Limited (collectively, "Willowood" or the "Defendants") relating to Syngenta's azoxystrobin products.

Assuming the Finder of Fact determines the Defendants' actions are improper, ¹ I find that Syngenta's damages are between \$75.7 million and \$273.4 million. With prejudgment interest, damages are between \$85.7 million and \$297.9 million. If it is determined that the Defendants infringed on Syngenta's patents, I find that Syngenta's lost profit damages are between \$75.7 million and \$273.4 million (\$85.7 million to \$297.9 million, with prejudgment interest). If the Finder of Fact determines that the Defendants infringed on Syngenta's copyrights, the damages would be \$135.5 million (\$155.3 million with prejudgment interest).

The opinions in this Report are preliminary and are based on the documents in *Exhibit 1* in addition to conversations with Syngenta personnel, and my experience and training. I reserve the right to modify and/or expand my opinions as I obtain additional information or perform any additional work or analysis I may be asked to perform prior to or at trial.

¹ This Report assumes that the Finder of Fact makes such a determination. As an economist and statistician, I have no opinion about whether the actions were improper. As a result, this Report does not refer to the Defendants' actions as being improper; only that they are alleged to be improper. Nonetheless, I understand that Willowood concedes that at least Willowood USA, LLC infringed Syngenta's U.S. Patent Nos. 5,602,076 and 5,633,256 by importing azoxystrobin into the United States in 2013 and using that azoxystrobin technical by having it 1) formulated into end-use products and 2) tested in 2013. (Defendants' Second Supplemental Non-Infringement and Invalidity Contentions, dated June 27, 2016, pp. 2, 7-8; Willowood's Responses to Syngenta's Requests for Admission, dated July 29, 2016, pp 1-21).

A&M DI is compensated for its services on an hourly basis and is being reimbursed for out-of-pocket expenses. A&M DI is compensated at a rate of \$595 per hour for my time. Other individuals from A&M DI also provided assistance in this matter; their hourly rates range from \$185 to \$450. No one who has contributed to this engagement has any known financial interest in any party to the matter. A&M DI's compensation is neither based nor contingent on the results of this analysis.

This report is provided solely for use in the matter described in the caption at the top of this report. This report is not to be used with, circulated, quoted or otherwise referred to in whole or in part for any other purpose, or in any other document without my expressed written consent.

I. Qualifications

My qualifications are stated in my curriculum vita, which is attached as *Exhibit 2*. That exhibit details my education, credentials, testimony, and publications.

In particular, I am a Managing Director at Alvarez & Marsal Disputes and Investigations, LLC. I have performed economic analyses in a great variety of engagements, including financial analysis, contract losses, a wide range of class action matters, employment discrimination, and intellectual property matters. I am the author of an annual report analyzing the crop insurance industry as well.

I have a Bachelor of Arts degree, Magna cum Laude with Distinction in Major in Mathematics and Economics from the University of Pennsylvania as well as a General Course Degree in Mathematics and Statistics from the London School of Economics. I was awarded a Ph.D. in Managerial Economics and Decision Science from the Kellogg Graduate School of Management at Northwestern University.

I have served as a professor of economics, finance and statistics in the business schools at the University of Michigan, the University of Iowa, Northwestern University and the Helsinki School of Economics.

My research has been published in the *Journal of Finance*, the leading academic journal in finance, which covers topics in subfields such as corporate finance, asset valuations and forensic economics. I have been awarded research grants from multiple universities as well as from the United States Government's National Science Foundation. My research has been extensively cited. For example, the former President of the University of Chicago relied on my undergraduate thesis as the theoretical basis for one of his published research papers. I also served as a referee for multiple academic journals and textbooks.

As an undergraduate, I spent three years as a research assistant to the 1980 Nobel Prize winner Lawrence R. Klein. Dr. Klein was awarded the Nobel Prize in Economics for economic and statistical forecasting. As a graduate student, I studied under Roger Myerson, who won the 2007 Nobel Prize in Economics for game theory, and Dale Mortensen, who won the 2010 Nobel Prize in Economics for his study of labor markets.

I was also involved in the trading of corn and soybean futures while interning in the grain pits at the Chicago Board of Trade.

II. Case Background

A. Syngenta Crop Protection, LLC

The Plaintiff, Syngenta Crop Protection, LLC, is a limited liability company organized and existing under the laws of the State of Delaware,² and a United States subsidiary of Syngenta AG,³ a world-leading agribusiness producing products for crop protection, seeds, and lawn & garden applications.⁴ Syngenta is involved in the research, development, manufacture, and sale of crop protection chemicals, including fungicides, herbicides, insecticides, and seed treatments to control weeds, insects, and diseases in agricultural crops such as corn, wheat, soybeans, sugar beets, and cotton.⁵ Sister companies to Syngenta sell products for use in seed and lawn & garden applications in the United States.⁶

One of the world's best-selling proprietary fungicides and Syngenta's largest selling product worldwide is azoxystrobin. Azoxystrobin is registered for use in approximately 100 countries and for approximately 120 crops, including row crops such as corn, soybeans, and wheat.

Azoxystrobin prevents and/or cures the major groups of pathogenic plant fungi, which cause soil-borne and foliar diseases such as rusts, powdery mildew, downy mildew, black rot, scab, anthracnose, white mold, *Rhizoctonia* limb, peg rot, early and late leaf spot, black sigatoka, botrytis, web blotch, and rice blast. Preventing and/or curing these fungal diseases through azoxystrobin:

² Complaint, dated March 27, 2015, ("Complaint"), p. 2.

³ www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=2732461.

⁴ Syngenta AG Form 20-F, dated February 11, 2016, p. 44 (www4.syngenta.com/~/media/Files/S/Syngenta/media-releases/2015-form-20-f.pdf) ("Syngenta AG Form 20-F").

⁵ www.syngentacropprotection.com; Complaint, p. 2.

⁶ www.syngenta-us.com/crops; www.syngentaprofessionalproducts.com/ppmain.aspx.

⁷ Nigel Uttley, Product Profile: Azoxystrobin (www.agribusinessglobal.com/agrichemicals/fungicides/product-profile-azoxystrobin) ("Azoxystrobin Product Profile").

⁸ Syngenta AG Form 20-F, p. 17.

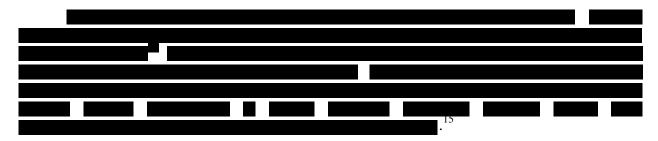
⁹ Ibid; Deposition of Rex Wichert, dated July 15, 2016, p. 31.

¹⁰ Amount excludes fungicides for use in lawn & garden, seed treatment, and wallboard applications (Gross to Net June LP.xlsx (SYN 287760).

¹¹ Azoxystrobin Product Profile.

- Improves plant growth and average yields ("up to two to three times return on investment for corn"); 12
- Provides long-lasting preventative and curative disease control to combat existing diseases; and,
- Provides movement throughout entire plant to provide uniform coverage.¹³

Azoxystrobin is sold in two forms: technical and end-use. Azoxystrobin technical refers to azoxystrobin in a relatively pure form that is then used as an active ingredient in end-use azoxystrobin products. Syngenta uses azoxystrobin technical in its own end-use products and sells it to select third-party suppliers, who either manufacture their own end-use azoxystrobin product or repackage Syngenta's product.



Syngenta's end-use azoxystrobin is sold under several different brand names such as Quilt, Quadris, Abound, and Trivapro. There are four general applications for end-use azoxystrobin. First, end-use azoxystrobin is primarily used as a crop protection product. Growers apply end-use azoxystrobin (sometimes in combination with other insecticides and herbicides) to planted agricultural crops like corn, wheat, and soybeans to protect them from various fungi. Second, end-use azoxystrobin has seed care uses, where the chemical is applied to seeds prior to planting. Third, end-use azoxystrobin can be applied to lawn & garden products. Fourth, end-use azoxystrobin is used as an ingredient in paper, wallboard, and paperboard products.

¹² QUILT XCEL Competitor Sheet (www.syngentacropprotection.com/quilt-xcel-fungicide?tab=details) ("QUILT XCEL Competitor Sheet").

¹³ QUILT XCEL Competitor Sheet and QUADRIS Early Info Sheet (www.syngentacropprotection.com/quadrisfungicide?tab=details).

¹⁴ Deposition of Jeff Cecil, dated July 13, 2016, p. 127.

¹⁵ Exhibits B and C to (SYN 284185-86).

www.syngenta-us.com/labels/quilt; www.syngenta-us.com/labels/quadris; www.syngenta-us.com/labels/abound-flowable; and www.syngenta-us.com/labels/trivapro.

¹⁷ See *Exhibit 3*.

¹⁸ I understand Willowood considers the first three applications to be part of the crop protection portion of its company. Deposition of Brian Heinze, dated August 4, 2016, pp. 133-134.

I understand that the United States Environmental Protection Agency ("EPA") has to approve each application of end-use products. As discussed below, I conservatively limit my analysis in this Report to azoxystrobin crop protection products, which I call the "AZ Products-at-Issue."

The AZ Products-at-Issue typically are sold through a two-step or three-step distribution chain. In the two-step chain, Syngenta sells its products to cooperatives or independent distributors, who then sell to growers. In the three-step system, Syngenta sells to distributors or cooperative unions who act as wholesalers. These wholesalers then sell the product to independent dealers or primary cooperatives before on-selling to growers. ¹⁹

I understand that a Syngenta predecessor first sold its azoxystrobin technical and end-use products in 1997. As shown in *Exhibit 3*, between 2012 and June 2016, Syngenta marketed the AZ Products-at-Issue under several brands.

I would like to highlight two types of new brands that Syngenta introduced in the past 18 months. First, in 2015, Syngenta introduced Aframe and Aframe Plus end-use azoxystrobin products. Aframe includes azoxystrobin as the active ingredient. Aframe Plus includes azoxystrobin and propiconazole as active ingredients. Aframe Plus includes azoxystrobin and propiconazole as active ingredients.

Second, in 2016, Syngenta introduced their latest generation fungicides to the United States, under the brand names Trivapro and Elatus. ²⁶ Not only do these products contain azoxystrobin, but they also contain other active ingredients that augment the benefits of azoxystrobin and help address different crop and disease profiles. ²⁷ For example, Trivapro includes azoxystrobin, benzovindiflupyr, and propiconazole as active ingredients. ²⁸ Syngenta

¹⁹ Syngenta AG Form 20-F, p. 26; Deposition of Jeff Cecil, dated July 13, 2016, p. 102.

²⁰ (SYN 287760); (SYN 287759).

²¹ (SYN 287760).

²² EPA Registration Nos. 100-1098 (SYN 290830-73) and 100-1324 (SYN 290696-748).

²³ (SYN 283733-98).

²⁴ Deposition of Jeff Cecil, dated July 13, 2016, Exhibit 1, p. 3.

²⁵ Deposition of Jeff Cecil, dated July 13, 2016, p. 37.

²⁶ (SYN 287760).

²⁷ Deposition of Andrew Fisher, dated July 22, 2016, pp. 49-52.

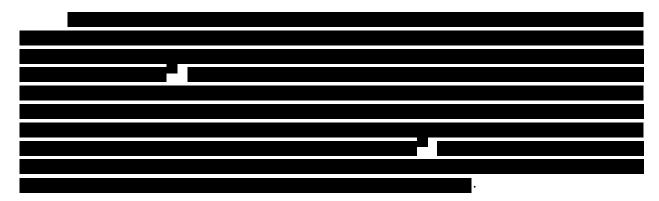
²⁸ EPA Registration Nos. 100-1324 (SYN 290696-748).and 100-1471 (SYN 290896-935).

registered benzovindiflupyr under the trademark Solatenol in the United States in January 2015. 29 According to Syngenta:

Trivapro[™], the next generation corn fungicide from Syngenta, is the hardest-working, longest-lasting fungicide on the market. In fact, Trivapro works ten times harder than competitive brands. What sets Trivapro apart from the competition? Trivapro contains Solatenol® fungicide, a breakthrough SDHI that is ten times more powerful than any other SDHI on the market. Combined with proven performers azoxystrobin and propiconazole, Trivapro gives growers the powerhouse fungicide they need to help shut down existing disease and prevent future infections.³⁰

Syngenta indicates that Trivapro provides excellent, long-lasting residual disease control, binds the waxy layer of the plant for extended stay put protection, offers preventative and curative disease control, and average yield increases. Solatenol-based products were first introduced outside of the United States in 2013 and were considered a blockbuster performer. ³²

Elatus was also introduced in 2016 and includes azoxystrobin and Solatenol/benzovindiflupyr. According to Syngenta, Elatus is the next generation fungicide for peanut and potato growers looking to improve disease control, maximize yield, and protect quality.³³



Azoxystrobin is part of the strobilurin family, which are a class of agricultural broad spectrum fungicides. ³⁶ Other companies including Bayer, DuPont, and BASF sell brand-name

²⁹ U.S Trademark Serial Number 85373576.

³⁰ www.syngentacropprotection.com/trivapro-fungicide.

³¹ Ibid.

³² Syngenta AG Form 20F, p. 22; www.prnewswire.com/news-releases/syngenta-receives-epa-registration-for-breakthrough-fungicide-solatenol-300135791.html.

³³ www.syngentacropprotection.com/elatus?tab=details-(solatenol-fungicide-+-azo)-fungicide.

³⁴ Deposition of Jeff Cecil, dated July 13, 2016, Exhibit 20, p. 3 (SYN 056120-41); Exhibit 1, p. 18 (SYN 283441-62)

³⁵ Deposition of Jeff Cecil, dated July 13, 2016, Exhibit 1, p. 18 (SYN 283441-62).

³⁶ Deposition of Jeff Cecil, dated July 13, 2016, pp. 84 –85.

Given the importance of azoxystrobin, Syngenta and its predecessor companies applied for and obtained patents directed to its azoxystrobin products. In 1997, United States Patent and Trademark Office ("USPTO") awarded Syngenta U.S. Patent Nos. 5,602,076 ("the '076 Patent")³⁷ and 5,633,256 ("the '256 Patent"),³⁸ which I understand expired together on February 11, 2014. I also understand that the '076 and the '256 Patents each cover groups of chemical compounds that include technical azoxystrobin.³⁹

Syngenta also invested significant resources developing processes for manufacturing azoxystrobin technical, including the processes set forth in U.S. Patent No. 5,847,138 ("the '138 Patent") and U.S. Patent No. 8,124,761 ("the '761 Patent"). The USPTO issued the '138 Patent on December 8, 1998, and I understand the '138 Patent expired on December 8, 2015. ⁴⁰ The USPTO issued the '761 Patent on February 28, 2012, and I understand the '761 Patent does not expire until at least April 15, 2029. ⁴¹ It is my understanding that it is significantly more expensive to produce azoxystrobin without utilizing the processes claimed in the '138 Patent and the '761 Patent. I understand that Syngenta alleges that Willowood willfully infringed on these patents. This further supports my opinion about the uneconomic nature of alternative processes to manufacture azoxystrobin without infringing the '138 Patent and the '761 Patent.

In addition to Syngenta's patent protection, I understand that under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), the EPA requires companies to place labels on their fungicides that describe the product, its use, directions for use, storage & disposal, precautionary statements, and other product-related items. The EPA places such high importance on the labels that they often require companies to edit their labels before FIFRA approval is granted. Companies also place great care and time in the creation of these labels. Not only do these labels instruct the consumer regarding how to use the products, but also the labels serve as a marketing tool that sets forth the company's vision for the product. As Dr. Adora Clark, Fungicide Team Lead – Azoxystrobin Regulatory Manager at Syngenta, testified, the labels tell Syngenta's story to the grower about how to utilize the fungicide and how the product fits the grower's needs. The label also sets forth the manufacturer's warranties and ways in which the manufacturer might be liable if the product is considered defective.

³⁷ U.S. Patent No. 5,602,076.

³⁸ U.S. Patent No. 5,633,256.

³⁹ Plaintiff Syngenta Crop Protection, LLC's Second Supplemental Infringement Contentions, dated July 29, 2016.

⁴⁰ U.S. Patent No. 5,847,138.

⁴¹ U.S. Patent No. 8,124,761.

 $^{^{42}}$ For example, see page 1 of EPA Registration Nos. 10182-415 (SYN 290635-50), 100-1161 (SYN 290656-95), and 279-3442 (SYN 289973-94).

⁴³ Deposition of Adora Clark, dated July 22, 2016, p. 38.

⁴⁴ Deposition of Adora Clark, dated July 22, 2016, p. 20.

I am informed that Syngenta's labels are entitled to copyright protection from the time they were created. Syngenta submitted its copyrighted azoxystrobin labels for registration with the United States Copyright Office ("UCO") before the filing of this lawsuit. For example, Syngenta registered the Quadris Flowable Fungicide label with the UCO on March 25, 2015 under UCO Registration No. TX0007992684. The Quilt Xcel label was registered with the UCO on March 25, 2015 under UCO Registration No. TX0007994113. UCO Registration No. TX0007992684 and UCO Registration No. TX0007994113 were published on July 31, 2013 and July 18, 2013, respectively.

As discussed above, Syngenta sells crop protection products including fungicides, herbicides, and insecticides, which many growers utilize in conjunction with one another. For example, growers sometimes request combinations of a fungicide, herbicide, and/or insecticide so that they could obtain the benefits of all three in one application. It is my understanding that growers sometimes request that the fungicide, herbicide, and/or insecticide in such combinations are manufactured by the same company. That is because growers sometimes receive volume discounts if they purchase from the same manufacturer. In addition, if a grower has a crop failure, the claims process could be more difficult when multiple chemical providers are used.

B. Willowood (the Defendants)

The Defendants are part of the Willowood group of companies that, among other things, import, develop, formulate, market, sell, and offer for sale generic crop protection products. Willowood Limited is a Hong Kong based company, whom I understand sells azoxystrobin technical to Willowood USA, LLC and ships the azoxystrobin technical into the United States. Willowood USA, LLC, a Delaware-based company, arranges for the azoxystrobin technical to be formulated into end-use azoxystrobin products that it then markets, sells, and offers for sale in the United States. Beyond azoxystrobin, Willowood USA, LLC generally sells and offers for sale herbicides, fungicides, insecticides, and other crop protection products for grass seeds, sugar beets, corn, rice, tree fruits, nuts, grapes, and soybeans to the United States agriculture industry. Willowood Azoxystrobin, LLC and Willowood, LLC are Oregon-based companies that are wholly owned by Willowood USA, LLC. In some instances, Willowood Azoxystrobin, LLC has purchased and imported azoxystrobin products in the United States. Willowood, LLC applied for, obtained, and holds the EPA registrations on the end-use azoxystrobin products sold by the Defendants, and Willowood, LLC was responsible for and commissioned the testing work conducted in connection with those EPA registrations. Willowood, LLC also markets end-use

⁴⁵ Deposition of Brian Heinze, dated August 4, 2016, pp. 64, 67-68, and 71-72.

⁴⁶ Deposition of Brian Heinze, dated August 4, 2016, pp. 67-68; Defendants' Answers and Objections to Plaintiff's Fourth Set of Interrogatories, dated July 14, 2016, pp. 2 and 4-7.

⁴⁷ www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=117472488.

⁴⁸ Deposition of Brian Heinze, dated August 4, 2016, p. 39.

⁴⁹ Deposition of Brian Heinze, dated August 4, 2016, pp. 49-50, 55, 57-58, and 60-61.

⁵⁰ Deposition of Brian Heinze, dated August 4, 2016, pp. 40-42.

azoxystrobin products and has represented itself as a distributor of end-use azoxystrobin products in the United States. 51

Syngenta alleges that the Defendants performed several improper actions to aid the latter's azoxystrobin sales.

The EPA requires manufacturers to file an end-use product application when they desire to sell fungicides. Manufacturers are required to submit comprehensive data showing that the fungicide meets FIFRA's requirements, including a demonstration that the product is safe. However, the data requirements ordinarily applicable to manufacturers are relaxed if the pesticide they seek to register utilizes a pre-approved product. In particular, the Formulator's Exemption "excuses an applicant from the requirement to submit or cite data pertaining to any pesticide contained in his product that is derived solely from one or more EPA-registered products with the applicant purchases from another person." 52

Willowood utilized the Formulator's Exemption in its August 13, 2013 EPA end-use product application for its azoxystrobin product Azoxy 2SC, known as Azoxystrobin 2.08SC at the time. ⁵³ In particular, Willowood's application stated that it was using Syngenta's preapproved registration for azoxystrobin. I understand Willowood also utilized the Formulator's Exemption in its EPA end-use product application for its AzoxyProp Xtra product, another end-use azoxystrobin product. ⁵⁴

However, contrary to its application, Willowood did not utilize Syngenta's azoxystrobin in its Azoxy 2SC or AzoxyProp Xtra products. In fact, Syngenta has never supplied Willowood with azoxystrobin technical or end-use azoxystrobin products. Furthermore, Willowood concedes that it never sought to obtain azoxystrobin from Syngenta. Based on Willowood's allegedly false statements in the Formulator's Exemptions accompanying Willowood's end-use registrations, the EPA approved Willowood's Azoxy 2SC and AzoxyProp Xtra end-use product applications on January 6, 2014 and June 11, 2014, respectively. The supplication of the sup

Without use of the Formulator's Exemption, Willowood would not have been able to obtain EPA approval and sell its azoxystrobin products, as early as it did. Not only does a company submitting an EPA end-use application with a Formulator's Exemption avoid the time consuming process of obtaining data demonstrating the efficacy of a fungicide, ⁵⁸ the EPA approves applications that cite to a Formulator's Exemption more rapidly than other

⁵¹ Deposition of Brian Heinze, dated August 4, 2016, pp. 44-46.

⁵² 40 C.F.R. § 152.85 as cited in Complaint, paragraph 40.

⁵³ EPA Registration No. 87290-44 (SYN 291061-125); Compliant, Exhibit 16, p. 4.

⁵⁴ EPA Registration No. 87290-56 (SYN 291185-217).

⁵⁵ Deposition of Rex Wichert, dated July 15, 2016, Exhibit 2.

⁵⁶ Answer, paragraphs 46-50; Answer.

 $^{^{57}}$ EPA Registration Nos. 87290-44 (SYN 291061-125) and 87290-56 (SYN 291185-217). I understand Syngenta has requested that the EPA reverse its decision (Deposition of Jeff Cecil, dated July 13, 2016, p. 83).

⁵⁸ Deposition of Adora Clark, dated July 22, 2016, p. 42.

applications.⁵⁹ As a result, the Formulator's Exemption enabled Willowood to speed up the time to market for its azoxystrobin products.⁶⁰ In fact, Willowood itself describes its registration process as "unique and the fastest in the industry," and has explained to investors that its process takes approximately 12 months whereas other competitors take significantly longer.⁶¹

Similarly, Willowood obtained early EPA approval by infringing on the '076 and '256 Patents. In particular, because Syngenta's azoxystrobin is covered by the '076 and '256 Patents, which had not expired when Willowood filed its EPA end-use product applications, Syngenta alleges that Willowood infringed on its patents by importing azoxystrobin technical into the United States and using the azoxystrobin technical to apply for and obtain its EPA registrations and further by inducing others such as Adjuvants Unlimited and Analytical & Regulatory Chemistry to use the azoxystrobin technical in formulation and testing activities before the expiration of these patents. These infringing activities enabled Willowood to support its early registration applications. Moreover, azoxystrobin sales peak in the fourth quarter of the year as well as in the spring. Thus, Willowood was able to leverage its early EPA submissions and registrations to make sales of end-use azoxystrobin products in Q4 2014 and Q1 2015. Willowood likely would have missed making azoxystrobin sales for all or most of the 2015 growing season if it had waited to submit its end-use application until the expiry of the '076 and '256 Patents.

Willowood manufactures its azoxystrobin technical via its manufacturer in China, Yancheng Tai He Chemicals Co., Ltd. ("TaiHe"), and Willowood has imported and continues to import this azoxystrobin technical from TaiHe into the United States for use in its end-use products. Syngenta alleges that Willowood's azoxystrobin technical is manufactured using the patented process of the '138 and '761 Patents. To the extent that these patents were and currently are utilized, Willowood has further infringed on Syngenta's '138 and '761 Patents.

Willowood began marketing its azoxystrobin products in 2013. For example, as early as March 2013, Matt Heinze, a Regional Account Manager at Willowood USA, began emailing potential customers regarding Willowood's upcoming azoxystrobin products that he compared to Syngenta's products (e.g., Quadris, Abound). In December 2013, Brian Heinze, President and CEO of Willowood USA, emailed colleagues stating they needed to start getting partners lined up early in 2014 to sell its azoxystrobin. This appears to have occurred because, for example, Joe Middione and Brian Heinze corresponded with Tim Zech of United Turf Alliance regarding

⁵⁹ Deposition of Adora Clark, dated July 22, 2016, p. 150.

⁶⁰ Deposition of Rex Wichert, dated July 15, 2016, pp. 41-44.

⁶¹ Deposition of Brian Heinze, dated August 4, 2016, pp. 119-122; Willowood Management Presentation (WW026466).

⁶² Plaintiff Syngenta Crop Protection, LLC's Second Supplemental Infringement Contentions, dated July 29, 2016, pp. 1-2; Complaint, paragraphs 90-91 and 95-96.

⁶³ Deposition of Rex Wichert, dated July 15, 2016, p. 183.

⁶⁴ Defendants' Responses to Plaintiff's First Set of Requests for Admission, dated July 29, 2016, p. 7 ("Yancheng Tai He Chemicals Co., Ltd. is the only source of azoxystrobin technical imported by Willowood USA, LLC:").

⁶⁵ Deposition of Brian Heinze, dated August 4, 2016, pp. 154-157.

⁶⁶ Email from Brian Heinze to Joe Middione, et al, on December 23, 2013 (WW025053).

a potential azoxystrobin supply agreement in February 2014 and March 2014.⁶⁷ By June 2014, Willowood had provided indications to customers regarding the pricing of its products.⁶⁸ Willowood also periodically emailed potential customers regarding its azoxystrobin products and informed them of Willowood's price reductions.⁶⁹ Willowood was persistent with its marketing as Syngenta personnel noted that growers were being inundated with information about Willowood's AzoxyProp Xtra by July 2015.⁷⁰

Exhibit 5 displays Willowood's azoxystrobin sales, including sales of azoxystrobin technical, Azoxy 2SC, and AzoxyProp Xtra from 2014 through June 13, 2016 based on information provided by Willowood. Willowood recently began selling Tebustrobin SC (as of July 2016), a product that contains azoxystrobin. July 2016 sales of Tebustrobin SC are also displayed in *Exhibit 5*.

The Defendants not only sold their azoxystrobin end-use products directly to the distributors, but they also sold azoxystrobin technical and azoxystrobin end-use products to other companies who placed their own private labels on the products. For example, I understand Pinnacle Agriculture Holdings, LLC ("Pinnacle") purchased the Defendants' azoxystrobin and sold it through one or more of its subsidiaries such as Innvictis.^{73,74} In fact, Willowood states that it supplies azoxystrobin technical to Innvictis that is used to formulate a product called "Liberty 3 Way." Mr. Brian Heinze, Willowood's corporate witness, also testified that Willowood supplies Innvictis with azoxystrobin-containing private-label products called Trevo and TrevoProp as well as certain wholesale products that he could not immediately name.⁷⁶ Based on Mr. Heinze's testimony, I further understand that Willowood supplies azoxystrobin-containing private-label products to United Turf Alliance called ArmorTech Zoxy 2SC and ArmorTech Zoxy-T.⁷⁷

⁶⁷ Email from Joseph Middione to Brian Heinze on March 26, 2014 (WW020109-17); Willowood Azoxy 2SC, United Turf Alliance (UTA) Proposal (WW012046).

⁶⁸ Deposition of Brian Heinze, dated August 4, 2016, pp. 157-158, Exhibit 61 (WW012693).

⁶⁹ Deposition of Brian Heinze, dated August 4, 2016, pp. 150-153, Exhibits 43-44.

⁷⁰ Email from Mary Johnson to Bob Kacvinsky on July 20, 2015 (SYN 056311-12).

⁷¹ WW000057-60, WW000126-33, WW0026277-79, WW0026280-82, WW026687-88, and WW026690-91 (collectively "Willowood Sales Data"). Willowood provided July sales data for only Tebustrobin SC (WW026690-91).

⁷² Deposition of Brian Heinze, dated August 4, 2016, pp. 137-138.

⁷³ www.pinnacleagholdings.com/company/about; Willowood Sales Data.

⁷⁴ The aforementioned sales were recorded as "Pinnacle Ag," "Innvictis Crop Care, LLC," "Performance AG, LLC," and "Sanders" (Willowood Sales Data).

⁷⁵ Innvictis Liberty 3 Way Label (SYN 289322-39); Defendants' Responses to Syngenta Crop Protection, LLC's Third Set of Interrogatories, dated June 2, 2016, p. 2; Deposition of Brian Heinze, dated August 4, 2016, p. 108.

⁷⁶ Deposition of Brian Heinze, dated August 4, 2016, pp. 108-111; Innvictis Trevo Label (SYN 289334-69); Innvictis TrevoProp Label (SYN 289375-94).

⁷⁷ United Turf Alliance ArmorTech Zoxy 2SC Label (SYN 289278-94); United Turf Alliance ArmorTech Zoxy-T Label (SYN 289295-304); Deposition of Brian Heinze, dated August 4, 2016, pp. 113-114.

Upon introducing azoxystrobin products, the Defendants also sold their azoxystrobin products at low prices and continued to lower their prices. For example, Brad Reichman of Reichman Sales testified:

Willowood is just notorious just to – everything they bring in is that product usually goes way down in value when Willowood brings it. So how they price it I don't know, but it – usually, when Willowood comes in with a product, you know that product is going to the basement on floor pricing.⁷⁸

In fact, Willowood discounted prices to such a degree that Mr. Reichman testified that he was aware of even lower prices Willowood was providing to others in the industry that he could not profitably sell Willowood's end-use azoxystrobin.⁷⁹

The available pricing data reflects Willowood's low pricing. For example, Mr. Heinze testified that as early as October 2014, Willowood was offering Azoxy 2SC at \$125 per gallon, well below Syngenta's prices on Quadris. ⁸⁰ As Mr. Reichman testified, Willowood also apparently offered a rebate of \$25 on sales of Azoxy 2SC going back to October 2014 that resulted in a net price of \$100 per gallon on Azoxy 2SC for Reichman Sales. ⁸¹ As of January 2016, Willowood was also offering Azoxy 2SC to Innvictis at \$100 per gallon. ⁸²

Similarly, Willowood began offering AzoxyProp Xtra at \$90 per gallon as early as October 2014. According to Mr. Reichman, as early as February 2015, Willowood offered Reichman Sales product rebates that brought their net price on AzoxyProp Xtra down to around \$78-79. According to Mr. Reichman, as early as February 2015, Willowood offered Reichman Sales product rebates that brought their net price on AzoxyProp Xtra down to around \$78-79. Less than to a customer of the price reduction retroactive to July 1, 2015, and communicating the price reduction to all of its customers. Less than ten days later, on July 17, 2016, Willowood offered AzoxyProp Xtra to a customer (Innvictis) at \$76 per gallon. As of January 2016, Willowood was offering Innvictis AzoxyProp Xtra at \$75 per gallon.

As discussed in the prior section, the product label is an important marketing tool in selling fungicides. The Defendants are alleged to have copied substantial portions of Syngenta's copyrighted Quadris Flowable Fungicide label in their own Azoxy 2SC label. The Defendants

⁷⁸ Deposition of Brad Reichman, dated July 25, 2016, p. 56.

⁷⁹ Deposition of Brad Reichman, dated July 25, 2016, pp. 32-33.

⁸⁰ Deposition of Brian Heinze, dated August 4, 2016, pp. 160 and 169-170.

⁸¹ Deposition of Brad Reichman, dated July 25, 2016, p. 68.

⁸² Deposition of Brian Heinze, dated August 4, 2016, p. 189, Exhibit 58.

⁸³ Deposition of Brian Heinze, dated August 4, 2016, pp. 160 and 169-170; Deposition of Brad Reichman, dated July 25, 2016, p. 68.

⁸⁴ Deposition of Brad Reichman, dated July 25, 2016, p. 71.

⁸⁵ Deposition of Brian Heinze, dated August 4, 2016, pp. 152-153, 174-175, and 181-183.

⁸⁶ Deposition of Brian Heinze, dated August 4, 2016, pp. 184-185.

⁸⁷ Deposition of Brian Heinze, dated August 4, 2016, p. 189, Exhibit 58.

also allegedly copied substantial portions of Syngenta's copyrighted Quilt Xcel Fungicide label for use in their own AzoxyProp Extra label. In both instances, Willowood primarily utilized the language from Syngenta's label, but substituted Willowood and its product name for Syngenta and Syngenta's product name. Willowood did not even replace the name Syngenta with its own in every instance. For example, Willowood's Azoxy 2SC label stated that "Willowood Azoxystrobin 2.08SC (azoxystrobin) is a Group 11 fungicide... **Syngenta** encourages responsible resistance management to ensure effective long-term control of the fungal diseases on this label." Furthermore, Willowood stated to the EPA that it "incorporated label language from both EPA Reg. No. 100-1222 and EPA Reg. No. 100-1098 [which correspond to Syngenta's copyrighted Quadris Flowable Fungicide label] into the Willowood Azoxystrobin 2.08SC label."

At his deposition, Brian Heinze, Willowood's corporate witness, conceded that Willowood's Azoxy 2SC and AzoxyProp Xtra labels copied the language in Syngenta's Quadris and Quilt Xcel labels. Heinze also testified that Willowood sent emails to customers marketing its Azoxy 2SC and AzoxyProp Xtra products as alternatives to Syngenta's Quadris, Quilt Xcel, and Abound products. Similarly, Mr. Reichman testified that Willowood, in its communications with Reichman Sales, compared Azoxy2SC to Syngenta's Quadris product and characterized it as an equivalent for Quadris, and Willowood compared AzoxyProp Xtra to Quilt Xcel and characterized it as an equivalent to Syngenta's Quilt Xcel. Likewise, Dr. Rex Wichert, Manager of Customer Marketing for Syngenta, testified that Willowood copied Syngenta's label and then competed on price with a substitution-type approach.

Because I understand Syngenta's Quadris Flowable Fungicide and Quilt Xcel Fungicide labels are copyrighted and entitled to protection, the Finder of Fact could determine that key portions of the Defendants' marketing and sales were based on copyright infringement. Given that the Defendants' products contained azoxystrobin, the infringement conservatively affected only the AZ Products-at-Issue. 94

⁸⁸ Complaint, Exhibit 25, p. 5

⁸⁹ Complaint, Exhibit 16, p. 2.

⁹⁰ Deposition of Brian Heinze, dated August 4, 2016, pp. 315-316.

⁹¹ Deposition of Brian Heinze, dated August 4, 2016, pp. 153 and 155-156.

⁹² Deposition of Brad Reichman, dated July 25, 2016, pp. 88-89.

⁹³ Deposition of Rex Wichert, dated July 15, 2016, p. 176.

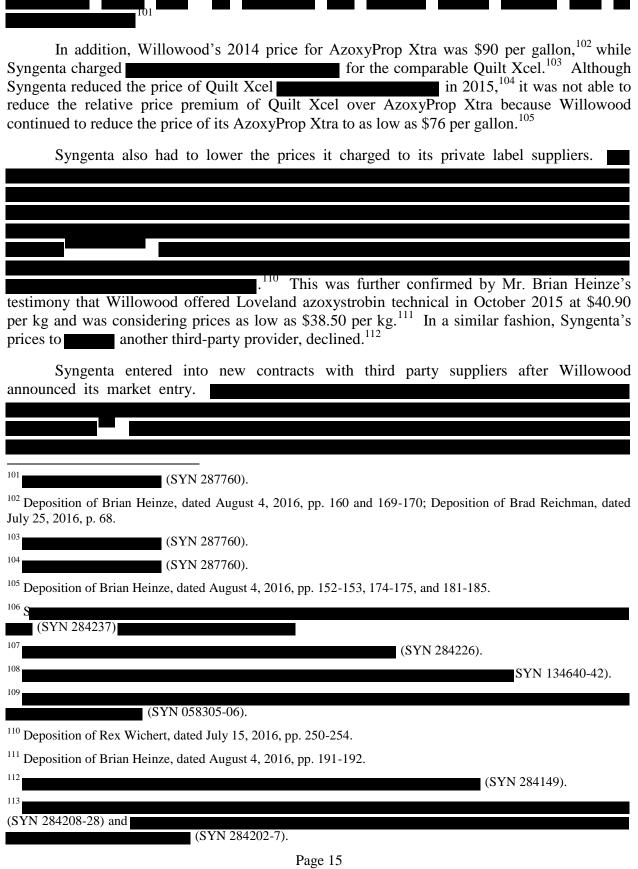
⁹⁴ Because Willowood sold approximately \$662,000 worth of azoxystrobin for lawn & garden applications (approximately less than 3% of its total azoxystrobin sales) (Willowood Sales Data), I conservatively ignore Willowood's effect on Syngenta's lawn & garden azoxystrobin sales from my lost profits calculations. As discussed above, the AZ Products-at-Issue exclude Syngenta's lawn & garden azoxystrobin products.

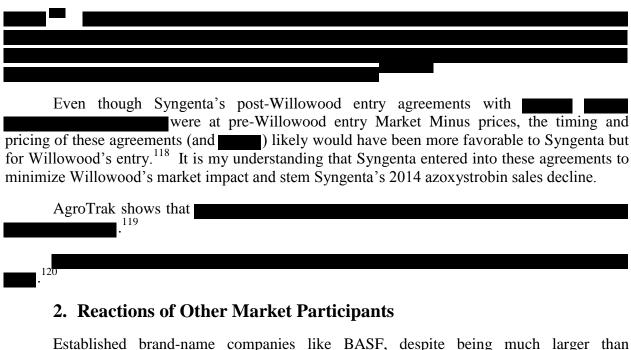
C. Reactions to Willowood's Actions

1. Syngenta's Reactions

Subject to Protective Order Attorneys' Eyes Only

Syngenta did not expect significant generic azoxystrobin entry in 2014, particularly because only certain patents directed to the azoxystrobin compound itself expired in that yea while several other patents directed to methods of making azoxystrobin were still in effect through at least 2015 and beyond.
. 96
However, as discussed in the prior section, the Defendants were able to market generic azoxystrobin in 2014 because they filed their EPA end-use application in 2013.
Faced with unexpected competition from lower-priced generic azoxystrobin offering from Willowood, Syngenta's existing azoxystrobin products were no longer viewed as a premium product by purchasers. Because Syngenta could not react by quickly altering it pricing, it was selling azoxystrobin in 2014 that the market viewed as being "overpriced."
Syngenta's 2014 sales decline is reflected in industry publications. For example in <i>Exhibit 4</i> , the AgroTrak data shows that
By late 2014 and 2015, Syngenta recognized the effect Willowood was having on the market and responded by significantly lowering its overall prices. ⁹⁷
,,98
To provide context for the price decline Syngenta experience, in 2014, Willowood sold its Azoxy 2SC for \$125 per gallon with rebates that brought the net price down to as low as \$100 per gallon, ⁹⁹ which was well below the \$191.80 average per gallon price for Syngenta's comparable Quadris (a \$66 price premium without the rebate and more than \$90 with the rebate). ¹⁰⁰
⁹⁵ Deposition of Rex Wichert, dated July 15, 2016, p. 35.
96 Exhibit 4 (SYN 291271).
⁹⁷ Willowood personnel noted that companies could alter their azoxystrobin prices based on "the absolute lowes number we hear to sell," even if that price is unattainable. (Email between Brian Heinze and Joe Middione, dated July 8, 2015 (WW010306-07).
⁹⁹ Deposition of Brian Heinze, dated August 4, 2016, pp. 160 and 169-170; Deposition of Brad Reichman, dated July 25, 2016, p. 68.
(SYN 287760).
Page 14





Established brand-name companies like BASF, despite being much larger than Willowood, had little impact on the sales and pricing of Syngenta's azoxystrobin products. If anything, Willowood's sales and pricing affected the brand-name companies like Syngenta and BASF.

Significantly, Willowood directed its actions at Syngenta, not the other brand-name companies. In fact, in a September 2015 presentation to investors, Willowood identified Syngenta as its only branded competitor in the sale of azoxystrobin products. As discussed above, Willowood's azoxystrobin products utilize the same active ingredient as Syngenta. They also used the same label as Syngenta's azoxystrobin products and continue to target the same crops and diseases as Syngenta's azoxystrobin products. In addition, Willowood's advertising is directed against Syngenta's products. For example, Willowood's website states that its Azoxyprop Xtra "contains the same active ingredient as Quilt Xcel," and that its Azoxy 2SC

```
(SYN 284273-83).

115 EPA Registration Nos. 228-720 (SYN 290373-423), 228-721 (SYN 290424-94), 228-722 (SYN 290495-529), 228-724 (SYN 290530-55), 55146-147 (SYN 290556-72), 55146-149 (SYN 290573-78), 55146-150 (SYN 290579-84), and 35935-101 (SYN 290367-72).

116 (SYN 284238-58).

117 (SYN 284238-58).

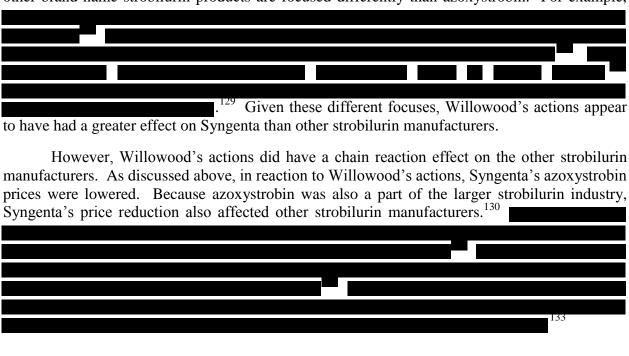
118 Syngenta also signed post-Willowood entry supply agreements with which sold azoxystrobin for lawn & garden and wallboard applications, respectively.

119 See Exhibit 4 (SYN 291271).

120 (SYN 291271).
```

"contains the same active as Quadris." ¹²² Furthermore, industry participants knew that Willowood's products were targeting Syngenta's products. For example, Norder Supply Inc., an independent retailer of crop protection and agricultural products, ¹²³ observed that growers were obtaining Willowood's AzoxyProp Xtra, which was an "exact look alike to [Syngenta's] Quilt Xcel." As noted above, Willowood also emailed customers indicating that its products were substitutes for Syngenta's Quadris, Quilt Xcel, and Abound products. ¹²⁵

Even though both Willowood and Syngenta participate in the larger strobilurin industry, other brand-name strobilurin products are focused differently than azoxystrobin. For example,



¹²² Azoxy 2SC Product Profile (www.willowoodusa.com/products/fungicides/azoxy-2sc/); AzoxyProp Xtra Product Profile (www.willowoodusa.com/products/fungicides/azoxyprop-xtra/).

(SYN 037161).

(SYN 037471-73).

¹²³ www.nordersupply.com/images/e0187101/about.htm.

¹²⁴ Email from Eric Larson to Rusty Harder, et al on January 14, 2015 (SYN 038212-13).

¹²⁵ Deposition of Brian Heinze, dated August 4, 2016, pp. 153 and 155-156.

¹²⁶ Deposition of Jeff Cecil dated July 13, 2016, p. 174.

¹²⁷ Deposition of Jeff Cecil dated July 13, 2016, pp. 174-175.

¹²⁸ Deposition of Jeff Cecil, dated July 13, 2016, p. 87.

¹²⁹ Ibid., pp. 86-87.

¹³⁰ Other brand-name strobilurin manufacturers did not have generic competition (Deposition of Jeff Cecil, dated July 13, 2016, p. 198).

¹³¹ Deposition of Jeff Cecil, dated July 13, 2016, pp. 71-72.

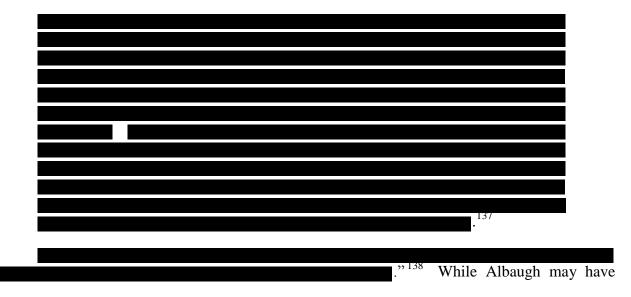
As Syngenta further noted, its experience was that Willowood's actions had a more profound effect on the strobilurin industry than brand-name manufacturers ever had historically. For example, Dr. Wichert testified:

At the time this was written, which would have been somewhere prior to November [20]14, I'm not aware at that point that [the other branded products] had had an impact on our azoxystrobin sales. 134

We've been in the fungicide market a long time with BASF and competed, and we've always considered them in our pricing in the fungicide market because they hold a large position in that. And then I believe I said that in all those years, we've never experienced the decline as we have with the early entry by Willowood and the way they've priced and compared their products in terms of labels, products to Syngenta with our azoxystrobin products in the market. ¹³⁵

The impact (if any) of generic companies other than Willowood was also limited.

Albaugh, LLC received EPA approval for generic azoxystrobin products only after Willowood's entry. Thus, as an initial matter, Albaugh's fungicide strategy could have been different had Willowood not prematurely entered the azoxystrobin industry. Moreover, it does not appear that Albaugh had much of a presence. For example, Dr. Wichert testified:



¹³⁴ Deposition of Rex Wichert, dated July 15, 2016, p. 196.

¹³⁵ Deposition of Rex Wichert, dated July 15, 2016, p. 242.

¹³⁶ EPA Registration Nos. 42750-261 (SYN 289530-86), 42750-262 (SYN 289587-92), 42750-284 (SYN 289593-611), 42750-285 (SYN 289612-36), 42750-289 (SYN 289637-72), 42750-290 (SYN 289673-707), 42750-291 (SYN 289708-21), 42750-292 (SYN 289722-34), and 42750-297 (SYN 289735-40).

¹³⁷ Deposition of Rex Wichert, dated July 15, 2016, pp. 67, 75, and 262 – 263. While Albaugh produced sales data, the data does not provide customer details. Albaugh, LLC, Sales by Item, February 16, 2015 through March 23, 2016 (ALB 000001-5).

¹³⁸ Deposition of Jeff Cecil, dated July 13, 2016, p. 81.

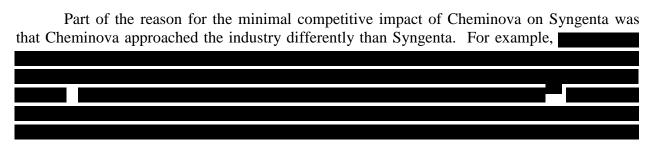
potentially offered crop protection products that competed with the AZ Products-at-Issue beginning in early 2015, ¹³⁹

As discussed above, the AZ Products-at-Issue include Syngenta brands in the crop protection industry and exclude Syngenta brands in the seed care industry. Consequently, one could question Albaugh's ability to affect the crop protection azoxystrobin industry, especially before early 2015.

Moreover, the available evidence indicates that Albaugh was not the lowest-cost generic provider. As an example, in November 2015, Albaugh's quoted price was almost 30% greater than Willowood's. Thus, to the extent that Albaugh participated in the crop protection azoxystrobin industry, they were not a major driver.

Cheminova A/S also sold crop protection azoxystrobin products, but Cheminova's impact (if any) on Syngenta's azoxystrobin sales and pricing was also limited. For example, Cheminova's EPA end-use product applications were approved after Willowood began marketing its azoxystrobin products and announced its entrance into the azoxystrobin industry. Thus, Cheminova could have altered its entry strategy if Willowood had not achieved the premature success that it did.

Despite Cheminova's EPA approval, Syngenta did not find Cheminova to be a significant player in the azoxystrobin industry. As Jeff Cecil testified, the "[v]olumes actually of Cheminova were quite low at the time as well and therefore, we were responding to a Willowood offer in the end. He went on to say that even if Cheminova was a participant, "Willowood was the primary concern." Dr. Wichert similarly explained that "[w]e didn't have a lot feedback or couldn't find much Cheminova product in the marketplace, so we never considered it to be of concern." 145



⁽Albaugh 000001-50).

¹⁴⁰ Deposition of Robert Andrew Fisher, dated July 22, 2016, p. 90.

¹⁴¹ Deposition of Jeff Cecil, dated July 13, 2016, pp. 154-155.

 $^{^{142}}$ EPA Registration Nos. 67760-124 (SYN 290002-62), 67760-129 (SYN 29155-70), and 67760-130 (SYN 290063-97).

¹⁴³ Deposition of Jeff Cecil, dated July 13, 2016, p. 38.

¹⁴⁴ Deposition of Jeff Cecil, dated July 13, 2016, p. 69.

¹⁴⁵ Deposition of Rex Wichert, dated July 15, 2016, p. 173.

¹⁴⁶ Deposition of Rex Wichert, dated July 15, 2016, pp. 260-261.

In fact, whereas Willowood's azoxystrobin labels targeted the entire gamut of crops addressed by Syngenta's products, Cheminova's EPA approvals were limited and did not include key crops such as corn or tobacco. ¹⁴⁷ As Dr. Wichert testified, these limitations made Cheminova's products less appealing to growers and, in turn, limited Cheminova's impact:

Willowood had all crops on their label from what I recall where Cheminova missed a few crops on their label, and one of those crops was corn. And why that has an impact is it's not a hundred percent, but a large number of the corn growers also grow soybeans, and most of the retailers are customers that service those growers, sell products for both crops, many crops. And so it's advantageous for them to have a product that can be used crows [sic] all the crops. And in this situation, there's actually risk, since our products are labeled on all crops and theirs aren't, that they could have an unlabeled application with, say, the Cheminova product, and so that would be a disadvantage for them. And given that, we actually weren't overly concerned about the impact of Cheminova's product. 148

Dr. Wichert went on to say that a key customer might not want to purchase from Cheminova because of these label restrictions.

When they bring in a product [they want] to have flexibility on the crops and markets they can sell into; makes it simpler for them and easier for them. And also if they sell a product or even in the worst case would happen to recommend that product on a crop in which it wasn't on the label, which is a risk given it's a generic of one of our products, there could be EPA fines and other issues associated with that. 149

Andrew Fisher echoed these thoughts when he testified:

Cheminova, they didn't have plant performance, and we talked earlier how important plant performance was. They didn't have that on their label. They also didn't have corn or tobacco on their label, and as you said earlier, corn, soy, and wheat, majority of the farmers throughout the U.S. will farm corn, soybeans, and wheat. And if you don't have a product that really carries all those labels, you can imagine the inventory issues, the concern that you would get into if you were spraying soybeans and it drifted on corn, it doesn't have a corn label, you can't sell that corn crop anymore. So Cheminova just didn't have the crops on their label to really be an issue in the market. ¹⁵⁰

¹⁴⁷ Deposition of Rex Wichert, dated July 15, 2016, p. 257.

¹⁴⁸ Deposition of Rex Wichert, dated July 15, 2016, p. 74-75.

¹⁴⁹ Deposition of Rex Wichert, dated July 15, 2016, p. 257.

¹⁵⁰ Deposition of Robert Andrew Fisher, dated July 22, 2016, p. 64.

Dr. Wichert also noted the similarities between the azoxystrobin labels of Willowood and Syngenta and contrasted it with Cheminova's label. For example, he testified that "Cheminova was a bit different. Willowood was directly competitive, same ratio, same product. It was just sold as a substitute, which is a damaging proposition to a company like ours." Additionally, Jeff Cecil found that Cheminova's azoxystrobin contained more impurities than Willowood's product. Industry officials also noted that Cheminova's azoxystrobin was more expensive than Willowood's, making the latter more of a market influence. These factors further limited any impact Cheminova may have had.

Although the EPA later approved Cheminova's azoxystrobin to treat corn in March 2015, Cheminova's industry participation also fell dramatically at the same time. Notably, in September 2014, FMC announced its intent to purchase Cheminova, ¹⁵⁴ which was consummated in April 2015. Brad Reichman testified that during this period of time, Cheminova became diverted with the merger and stopped selling azoxystrobin. After the merger, and by June 2015, FMC/Cheminova stopped importing azoxystrobin into the United States. In fact, Mr. Reichman explained that, by July 2015, FMC/Cheminova was "getting out of the business completely."

I understand there have been three recent entrants into the azoxystrobin industry. For example, on October 1, 2015, LG Life Sciences, Ltd. received EPA approval to sell a crop protection azoxystrobin fungicide. However, LG has not imported any azoxystrobin or otherwise made any sales of this fungicide, and its website does not even show that it sells azoxystrobin fungicides. Sharda USA LLC received EPA approval to sell an azoxystrobin fungicide on March 17, 2016. Agro USA, Inc., also known as Sipcam, received approval three months later. Given the recency of these entries, that these firms have not made any sales to date and that Sipcam primarily services the specialty agriculture and lawn & garden sectors, it would be speculative to draw conclusions about the future effects of these three

¹⁵¹ Deposition of Rex Wichert, dated July 15, 2016, p. 172.

¹⁵² Deposition of Jeff Cecil dated July 13, 2016, p. 114.

¹⁵³ Deposition of Brad Reichman, Dated July 25, 2016, p. 83.

www.bloomberg.com/news/articles/2014-09-08/fmc-to-buy-cheminova-for-1-8-billion-as-ceo-modifies-strategy.

¹⁵⁵ phx.corporate-ir.net/phoenix.zhtml?c=117919&p=irol-homeProfile&t=&id=&.

¹⁵⁶ Deposition of Brad Reichman, dated July 25, 2016, p. 26.

¹⁵⁷ Deposition of Rex Wichert, dated July 15, 2016, p. 258, Exhibit 19.

¹⁵⁸ Deposition of Brad Reichman, dated July 25, 2016, pp. 50-52.

¹⁵⁹ EPA Registration No. 71532-35 (SYN 290200-70). It also received EPA approval to sell a lawn & garden azoxystrobin product (EPA Registration No. 71532-34 (SYN 290191-99)).

¹⁶⁰ Deposition of Rex Wichert, dated July 15, 2016, p. 263.

 $^{^{161}\} www.lgls.com/chemistry/prod/product_view.jsp?ke_gubun=EN\&group_code=10\&mcategory_seq=18.$

¹⁶² EPA Registration No. 83529-49 (SYN 290585-614).

¹⁶³ EPA Registration No. 60063-57 (SYN 290615-34).

¹⁶⁴ Ibid.

companies on the sale of crop production fungicides. Furthermore, LG, Sharda, and Sipcam could have altered their entry strategies if Willowood had not achieved the premature success that it did.

III. Damages Models

In this matter, Syngenta has alleged that the Defendants engaged in two different types of improper behavior: A) patent infringement and B) copyright infringement. The available remedies and the economic models used to calculate damages for each claim type slightly vary. I discuss these models in Sections A-B below.

A. Patent Infringement Damages

Under patent laws, a patent holder or plaintiff is entitled to "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer." A patent holder may seek to recover lost profits damages as well as reasonable royalty damages, so long as the losses are not double-counted. In this case, Syngenta has never considered licensing its patents relating to azoxystrobin. In fact, Dr. Wichert testified that "[i]f Willowood would have approached us and asked us for a license, we would not have even entertained that option." Therefore, although Syngenta is entitled to at least reasonable royalty damages, I have focused my analysis on Syngenta's lost profits damages.

In determining the amount of lost profit damages to which a plaintiff patent holder is entitled, economists often look to the four-factor test from *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.* ¹⁶⁸ *Panduit* sets forth the following four factors that a patent holder must demonstrate to establish lost profits:

- 1. Demand existed for the infringed product during the period of infringement.
- 2. Acceptable non-infringing substitute products were not available to satisfy demand during the period of infringement.
- The patent owner possessed the manufacturing and marketing capability to have supplied the patented product to the customers who bought the infringing product.
- 4. The amount of profit the patent holder would have made. 169

¹⁶⁶ Deposition of Rex Wichert, dated July 15, 2016, p. 22.

¹⁶⁵ 35 U.S.C. §284.

¹⁶⁷ Deposition of Rex Wichert, dated July 15, 2016, pp. 245-246.

¹⁶⁸ 575 F.2d 1152 (6th Cir. 1978).

¹⁶⁹ Ibid.

In discussing the Second *Panduit* factor, the American Institute of Certified Public Accountants ("AICPA") wrote:

[A] patent holder need not negate each and every possibility that the purchaser would not have purchased a product other than its own, absent the infringement. Rather, the patent holder need only show that there was a 'reasonable probability' that the sales would have been made by it "but for" the infringement. If the patent holder establishes the reasonableness of this inference by satisfying all four prongs of the *Panduit* test, the burden of proving entitlement to lost profits due to the infringing sales has been sustained. 170

The Fourth *Panduit* factor requires the calculation of what economists call the "but for" profits: the profits the patent holder would have made "but for" the defendant's alleged infringement. Lost profit damages equal the difference between these "but for" profits and the profits the patent holder actually made. In other words, damages equals "but for" minus "actual."

One commonly accepted method of calculating a patent holder's "but for" profits (or sales) is the "yardstick" or "benchmark" method. In this method, the profits (or sales) the patent holder would have made "but for" the defendant's alleged infringement are estimated based on the profits (or sales) of a benchmark. Possible benchmarks include:

- The performance of the patent holder at a different location;
- The patent holder's actual experience versus past budgeted results;
- The actual experience of a similar business unaffected by the alleged infringement;
- Comparable experience and projections by nonparties;
- Industry averages; and,
- Pre-litigation projections¹⁷¹

In this approach, care must be taken to ensure that the patented product is sufficiently comparable to the benchmark.

In addition to "but for" profits on the patented products, the patent holder could be awarded profits on other products the patent holder would have sold "but for" the alleged infringement. These latter products are called convoyed products. For example, as discussed above in Section II.A., agriculture distributors, retailers, and growers sometimes simultaneously purchase, mix and apply herbicides, insecticides, and fungicides from a single supplier. Consequently, in this case, Syngenta could have lost profits on sales of herbicides and

¹⁷⁰ Jackson, Daniel L. and Kedrowski, Kathleen M. "Calculating Intellectual Property Infringement Damages," AICPA, 2013, p. 31 (SYN 289748-897) ("AICPA IP Damages").

¹⁷¹ Pollack, Richard A., Scott M. Bouchner, Craig M. Enos, Colin A. Johns and John D. Moyl "Calculating Lost Profits" AICPA, 2006, paragraph 67 (SYN 289898-972).

insecticides if the Finder of Fact determines that the Defendants infringed on Syngenta's azoxystrobin fungicide patents.

Because lost profit damages equal "but for" profits minus "actual" profits, the costs the plaintiff incurred or would have incurred are included in the calculations. Costs generally can be categorized in two ways: fixed and incremental. For example, as discussed below, Syngenta would have made additional sales "but for" the Defendants' infringement, and it had the manufacturing capacity in place to produce the additional product. Consequently, Syngenta would not have had to incur additional rent costs if it made additional sales. Economists call such costs that are unchanged in the "but for" and "actual" scenarios fixed. On the other hand, costs that vary between scenarios such as chemical ingredient costs are considered incremental. Incremental profits equal sales minus incremental costs. Basic math then implies that lost profit damages equal "but for" incremental profits minus "actual" incremental profits.

After calculating damages, economists must consider whether an award of *all* damages is an appropriate remedy. Under the "entire market value rule," a patent holder may recover damages based on the value of an entire apparatus or composition containing several features, even when only one feature is covered by the patents-at-issue, if 1) the patented and non-patented components are physically part of the same apparatus or composition, and 2) the patented feature drives demand for the entire apparatus or composition. ¹⁷² If the entire market value rule is not met, the economic expert must apportion damages between the patented and unpatented features of the product.

A patent holder's lost profits damages are not always limited to the infringement period; sometimes infringement can have a lingering effect that leads to future lost profits for the patent holder even after patent expiration. In this regard, the AICPA notes:

An issue that may affect damages is whether a defendant's infringement resulted in a market entry advantage that would not have existed but for the infringement. If the defendant, after issuance of an injunction, can enter the market again with a competing product sooner than would have been possible without the infringement, the plaintiff may suffer additional future lost sales and profits. This is most likely to occur if the patent is at or near expiration.¹⁷³

The lingering effects of head starts are especially important in the agriculture industry. For example, Everett Rogers, a leading expert on innovations, noted that the diffusion and adoption of innovation takes time:

Many technologists believe that advantageous innovations will sell themselves, the obvious benefits of a new idea will be widely realized by potential adopters, and that the innovation will diffuse rapidly. Seldom is this the case. Most innovations, in fact, diffuse at a disappointingly slow rate, at least in the eyes of

¹⁷² AICPA IP Damages, p. 52 (SYN 289748-897); *Lucent Techs., Inc. v. Gateway Inc.*, 580 F.3d 1301 (Fed. Cir. 2009)

¹⁷³ AICPA IP Damages, p. 45 (SYN 289748-897).

the inventors and technologists who create the innovations and promote them to others. 174

Providing an example of hybrid corn in the agricultural industry, Dr. Rogers observed:

Administrators of the Iowa Agricultural Experiment Station ... were puzzled as to why such an obviously advantageous innovation as hybrid corn was not adopted more rapidly....Today we understand that the uncertainty and risk associated with hybrid seed was one reason Iowa farmers were deliberate in adopting.¹⁷⁵

Based on his research, Dr. Rogers found that farmers, in particular, spend time gaining knowledge about a new product before adopting the product.

Knowledge proceeds at a more rapid rate than does adoption, which suggests that relatively later adopters have a longer average innovation-decision period than do earlier adopters. For example, a study of the diffusion of a new weed spray among Iowa farmers by Beal and Rogers (1960) found 1.7 years between 10 percent awareness-knowledge and 10 percent adoption but 3.1 years between 92 percent awareness-knowledge and 92 percent adoption....

None of Beal and Rogers's 148 respondents reported adopting immediately after becoming aware of a new weed spray. And 63 percent of the adopters of a new livestock feed reported a different year at which they acquired knowledge from the year in which they decided to adopt. Most individuals seemed to require a period of time that could be measured in years to pass through the innovation-decision process. So adoption behavior is a process that contains stages, and these stages occur over time. ¹⁷⁶

B. Copyright Infringement Damages

As compensation for copyright infringement, the copyright holder or plaintiff is entitled to not only lost profit damages and reasonable royalty damages, but also the profits the defendant unjustly earned because of the infringement, so long as no one sale is double-counted. In particular, the Copyright Act allows for the recovery of "any profits of the infringer that are attributable to the infringement and are not taken into account in computing the actual damages." Consequently, as long as there is no double recovery, the copyright holder may recover both (1) its actual damages and (2) the infringer's profits.

In my analysis, I focus on Syngenta's lost profits in calculating its actual damages for the alleged copyright infringement. I understand that the calculation of lost profit damages for copyright infringement follows the same principles as patent infringement, which I discuss in the

¹⁷⁴ Rogers, Everett M. *Diffusion of Innovations*, 5th Edition, 2003, p. 7 (SYN 290147-55).

¹⁷⁵ Ibid., p. 55 (SYN 290147-55).

¹⁷⁶ Ibid., pp. 197 and 214 (SYN 290147-55).

¹⁷⁷ 17 USC § 504 (b).

previous section. Although a plaintiff is not required to follow the specific steps prescribed in the *Panduit*, it can still be applied.

With regard to the disgorgement of the defendant's unjust earnings, I understand the plaintiff must show that the infringement affected the defendant's profits. The plaintiff must identify the sales the defendant made that related to the alleged infringement, and the burden then shifts to the defendant who must then identify the costs associated with those sales and/or other deductions. The plaintiff must identify the costs associated with those sales and/or other deductions.

IV. Calculation of Damages in this Matter

Because Syngenta asserts several claims in this matter, I separately calculate damages associated with each claim:

Section A below calculates lost profit damages assuming the Finder of Fact determines that the Defendants infringed Syngenta's '076 Patent and the '256 Patent.

Section B calculates lost profit damages assuming the Finder of Fact determines that the Defendants infringed Syngenta's '138 Patent.

Section C calculates lost profit damages assuming the Finder of Fact determines that the Defendants infringed Syngenta's '761 Patent.

The Finder of Fact could also determine that the Defendants infringed on Syngenta's copyrights. The profits the Defendants unfairly garnered because of such infringement are calculated in Section D. The profits Syngenta lost relating to such infringement are calculated in Section E.

In the aforementioned sections, I assume that it is determined that only the patent/copyright being analyzed in that section is being infringed. For example, in Section B, I assume that Syngenta's '138 Patent was infringed, while the '761 Patent was not infringed. Section F summarizes the results from Section A - E and calculates damages if the Finder of Fact determines that multiple patents/copyrights were infringed.

A. Lost Profits from the Defendants' Infringement of the '076 and '256 Patents

The damages calculated in this section are applicable if the Finder of Fact determines that the Defendants infringed Syngenta's '076 Patent and '256 Patent. ¹⁸⁰ In fact, I understand that Willowood has admitted that at least Willowood USA, LLC infringed the '076 and '256 Patents

¹⁷⁸ AICPA IP Damages, p. 93 (SYN 289748-897).

¹⁷⁹ Ibid., p. 94 (SYN 289748-897); 17 USC § 504 (b).

¹⁸⁰ I understand that the '076 and '256 Patents both cover the azoxystrobin compound, and for purposes of my analysis, the Defendants need only infringe one of these patents.

before their expiration on February 11, 2014.¹⁸¹ The damages calculated in this section are applicable regardless of whether the Defendants are found to infringe or have infringed Syngenta's '138 or '761 Patents.

To determine whether or not Syngenta is entitled to lost profits, I have applied the four-factor *Panduit* test (discussed above). Based on my analysis detailed below, I find that Syngenta's lost profits resulting from the Defendants' infringement of the '076 and '256 Patents are reasonably calculable.

1. Demand existed for the azoxystrobin which was covered by the '076 and '256 Patents

It is my understanding that the '076 Patent and the '256 Patent both cover the azoxystrobin compound, including all azoxystrobin technical. 182

As I set forth below, several factors demonstrate the demand for azoxystrobin.

First, the Defendants sold \$24.4 million of infringing azoxystrobin technical, Azoxy 2SC, AzoxyProp Xtra, and Tebustrobin SC products between July 2014 and July 2016. Refer to *Exhibit 5*.

Second, demand for the patented product is also demonstrated by Syngenta's historical sales experience. As shown in *Exhibit 6*,

[184] I conservatively exclude Syngenta's azoxystrobin sales for non-crop protection products from *Exhibit 6*. In particular, I exclude the sales of azoxystrobin used for wallboards, lawn & garden, and seed care from the lost profits calculation in this section.

Third, industry publications and Syngenta's product marketing demonstrate the demand for and importance of the patented products. According to the February 28, 2011 AgriBusiness Global product profile article on azoxystrobin, Syngenta's "broad-spectrum fungicide azoxystrobin has become the best-selling fungicide [active substance] in the world with sales of more than \$1 billion." Syngenta's product marketing demonstrates the importance of the patents-at-issue by touting that Syngenta's end-use azoxystrobin products 1) improve plant growth and average yields, 2) provide long-lasting preventative and curative disease control to

¹⁸¹ Defendants' Second Supplemental Non-Infringement and Invalidity Contentions, dated June 27, 2016, pp. 2 and 7-8; Defendants' Responses to Plaintiff's First Set of Requests for Admission, dated July 29, 2016, pp. 1-12.

¹⁸² Plaintiff Syngenta Crop Protection, LLC's Second Supplemental Infringement Contentions, dated July 29, 2016, pp. 1-14.

¹⁸³ Willowood Sales Data. Willowood provided July sales data for only Tebustrobin SC (WW026690-91).

¹⁸⁴ Gross to Net June LP.xlsx (SYN 287760) and Gross to Net June YTD 2016.xlsx (SYN 287759).

Azoxystrobin Product Profile (www.agribusinessglobal.com/agrichemicals/fungicides/product-profile-azoxystrobin/).

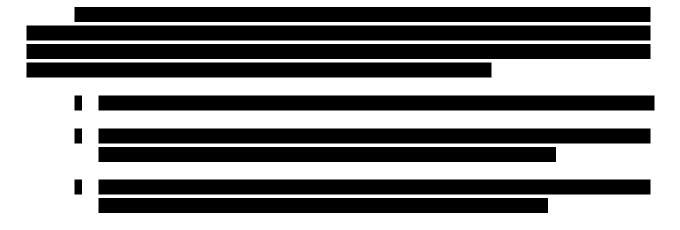
combat existing diseases, and 3) provide movement throughout the entire plant to provide uniform coverage. ¹⁸⁶

2. Customers who purchased azoxystrobin from the Defendants likely would have purchased from Syngenta in absence of the Defendants' product

As I discuss above in Section II.C.2, customers who purchased Willowood azoxystrobin likely would have purchased from Syngenta "but for" Willowood's infringement of the '076 Patent and '256 Patents. In fact, Willowood's products decidedly targeted and competed against Syngenta's azoxystrobin products, rather than other brand-name strobilurin products. Other companies were approved to sell azoxystrobin after Willowood's entry, which they might not have done if Willowood had not achieved the premature success that it did. Even if they continued to enter, most of these companies have not made any sales. Additional azoxystrobin providers sell Syngenta-based private label azoxystrobin. Moreover, as Syngenta personnel concluded that Cheminova and Albaugh were not active market participants; and they participated in different sectors of the industry. Albaugh was in the seed care sector and had a limited presence to the extent that Syngenta was unable to locate Albaugh products. Cheminova targeted different customers, geographies, and crop types, and after its corporate buy-out, FMC/Cheminova ceased selling azoxystrobin products.

Therefore, "but for" Willowood's infringement, I conclude that Syngenta would have been the only company able to provide this patented technology. Because Willowood's customers chose to purchase the infringing products, despite the existence of the other branded strobilurin crop protection fungicides, I have assumed that these customers would seek the AZ Products-at-Issue.

3. DESIGNATED AS ATTORNEYS' EYES ONLY BY SYNGENTA - Syngenta had the manufacturing and marketing capacity to make additional sales



QUILT XCEL Competitor Sheet (www.syngentacropprotection.com/quilt-xcel-fungicide?tab=details); QUADRIS Early Info Sheet (www.syngentacropprotection.com/quadris-fungicide?tab=details).



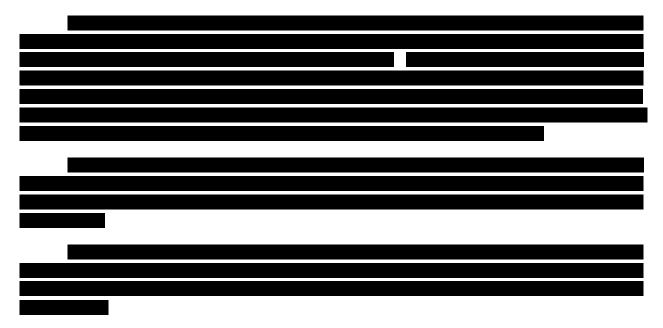
Therefore, Syngenta had, and would have had, sufficient manufacturing and marketing capacity to make the additional azoxystrobin sales implied in the analyses below.

4. The profits Syngenta would have made "but for" the Defendants' infringement of the '076 Patent and the '256 Patent.

As I discuss above, one commonly accepted method of calculating a patent holder's "but for" sales and profits is to utilize benchmarks. I conclude, based on discussions with Syngenta personnel and my own analysis that a combination of Syngenta's 1) budgets for azoxystrobin and 2) budgets and actual sales of herbicides with the active ingredient mesotrione provide the proper benchmarks for estimating Syngenta's azoxystrobin sales "but for" the Defendants' infringement of the '076 and '256 Patents.

a. Budgets as a Benchmark

I have discussed Syngenta's exacting budgeting process for its products with several Syngenta employees, including Dr. Rex Wichert, Andrew Fisher, and Victoria Bublyk. I summarize below my understanding based on these discussions.





However, given the exacting process employed to create the budgets and LPs, Syngenta believes that the budgets and LPs provide the best estimate about what the gross sales, net sales, cost of goods sold, and gross profits will be for each Syngenta product.

b. Mesotrione as a Benchmark

I find that mesotrione provides another benchmark for Syngenta's azoxystrobin. Whereas azoxystrobin is Syngenta's best-selling fungicide, mesotrione is one of Syngenta's best-selling herbicides. Mesotrione is available in more than 50 countries and posted more than \$400 million in annual revenue between 2012 and 2015. As I discuss below, and as confirmed by Dr. Wichert at his deposition, mesotrione and azoxystrobin have a number of product lifecycle similarities. Best-selling fungicide, mesotrione and azoxystrobin have a number of product lifecycle similarities.

In addition to azoxystrobin and mesotrione both being well-established products, mesotrione is approved to be applied on the major crops on which azoxystrobin is applied, including corn and soybeans. Thus, as I discuss above, growers sometimes simultaneously purchase, mix and apply fungicides and herbicides like azoxystrobin and mesotrione.

Moreover, generic companies faced similar barriers to entry with respect to azoxystrobin and mesotrione. For example, I understand that Syngenta's '076 and '256 Patents, which covered the azoxystrobin compound, expired on February 11, 2014. ¹⁹⁰ I understand that during the lifetime of the '076 and '256 Patents, Syngenta possessed the right to exclude others from importing, making, using, selling, or offering for sale the azoxystrobin compound in the United States. Similarly, although Syngenta had patents relating to the mesotrione compound that began to expire in 2012, I understand that, under FIFRA, Syngenta had data exclusivity over

 $^{^{187}}$ www.agribusinessglobal.com/uncategorized/product-profile-mesotrione/; Gross to Net June LP.xlsx. (SYN 287760).

¹⁸⁸ Deposition of Rex Wichert, dated July 15, 2016, pp. 265-267.

¹⁸⁹ Syngenta AG Form 20-F, p. 17; Syngenta Quilt Xcel Label (SYN 279541-69); Syngenta Calisto Label (SYN 289395-31); Syngenta Zemax Label (SYN 289432-59).

¹⁹⁰ Syngenta holds other patents relating to azoxystrobin, including the asserted '138 and '761 Patents, which I understand are directed to processes for manufacturing azoxystrobin.

mesotrione through June 4, 2014 in the United States.¹⁹¹ I understand that this data exclusivity barred generic companies from relying on data Syngenta had previously submitted to the EPA so that the generic companies could support their own mesotrione registration applications before June 4, 2014. Thus, with respect to both azoxystrobin and mesotrione, generic companies faced significant barriers to entry until the first half of 2014.

Further, with respect to both azoxystrobin and mesotrione, Syngenta introduced new combination products that contained other active ingredients. As I discuss in Section II.A. above, Syngenta introduced Trivapro, which is a combination fungicide that contains azoxystrobin, Solatenol, and propiconazole as active ingredients. I understand Trivapro received EPA approval on August 28, 2015, about 16 months after the '076 and '256 Patents expired. Similarly, Syngenta introduced Acuron, which is a combination herbicide that contains mesotrione, and bicyclopyrone as active ingredients

Syngenta received EPA approval to sell Acuron on April 24, 2015, ¹⁹⁶ which was about 10.5 months after Syngenta lost data exclusivity over mesotrione.

c. Calculating "But For" and Lost Profits

As a result of the Defendants' infringement of the '076 and '256 Patents, Syngenta suffered lost profits in the form of price erosion and lost quantity sales. To quantify these damages, I begin by calculating Syngenta's "but for" gross profits.

As shown in *Exhibit 7*,

conservatively exclude azoxystrobin used for seed care, lawn & garden, and wallboard applications from these figures because the Defendants' azoxystrobin was not used in these applications except in very limited quantities. ¹⁹⁷ If anything, consideration of seed care, lawn & garden, and wallboard applications would reflect even greater lost profits.

In determining Syngenta's "but for" gross profit, I have considered Syngenta's AZ Products-at-Issue. I understand that the AZ Products-at-Issue contain not only azoxystrobin,

¹⁹¹ EPA's response re: Petition for Extension of the Exclusive Use Data Protection Period for Mesotrione (EPA Reg. No. 100-1140) to June 4, 2014, Under FIFRA section 3(c)(1)(F)(ii) (www.epa.gov/sites/production/files/2014-04/documents/mesotrione-response.pdf).

⁽SYN 287760); (SYN 287759).

¹⁹³ Based on discussions with Syngenta, Trivapro is a mixture of Trivapro A and Trivapro B (Quilt Xcel; EPA approval was obtained March 25, 2009).

¹⁹⁴ EPA Registrations Nos. 100-1471 (SYN 290896-935) and 100-1324 (SYN 290696-748).

¹⁹⁵ EPA Registration Nos. 100-1466 (SYN 290749-90).

¹⁹⁶ EPA Registration Nos. 100-1466 (SYN 290749-90).

¹⁹⁷ EPA Registration No. 87290-44 (SYN 291126-84); Deposition of Brian Heinze, dated August 4, 2016, pp. 134-135. Because Willowood sold approximately \$662,000 worth of azoxystrobin for lawn & garden applications (approximately less than 3% of its total azoxystrobin sales; refer to Willowood Sales data), I conservatively ignore Willowood's effect on Syngenta's lawn & garden azoxystrobin sales from my lost profits calculations. As discussed above, the AZ Products-at-Issue exclude Syngenta's lawn & garden azoxystrobin products.

which is covered by the '076 and '256 Patents, but also other components. I find that the use of the AZ Products-at-Issue as the basis for my lost profits analysis appropriate because, as discussed above in Section IV.A.1, azoxystrobin drove demand for the products directly or through the Brand Ladder. Further, in each of the AZ Products-at-Issue, the azoxystrobin and other components are physically part of the same apparatus or composition. Thus, to the extent necessary, the entire market value rule is satisfied.

2014 "But For" Gross Profits

As I discuss above, the Defendants began marketing their end-use of azoxystrobin products as early as 2013 and began selling end-use azoxystrobin products in 2014. Thus, to estimate Syngenta's "but for" profits for 2014, I have assumed that "but for" the Defendants' actions, Syngenta would have achieved its budgeted amount of gross profits for azoxystrobin to the extent that Syngenta achieved its budget for its *comparable* mesotrione product. As shown in *Exhibit 9.d*, Syngenta's actual 2014 gross profits of mesotrione products for crop protection were than 2014 budgeted gross profits. Actual 2014 gross profits for all Syngenta crop protection fungicides (less gross profits of the AZ Products-at-Issue) ("Crop Protection Fungicides") were than the 2014 budget. Actual 2014 gross profits for all Syngenta products were than the 2014 budget.

At the same time, Syngenta's actual 2014 azoxystrobin gross profits for the AZ Products-at-Issue were than 2014 budget. 199

Because azoxystrobin and mesotrione face similar market conditions, I have used mesotrione as a benchmark to account for any potential impact of market conditions. For example, *Exhibit 8* shows that farm incomes declined from 2012 through 2014 as corn, soybean, and wheat commodity prices fell. Under these conditions, mesotrione achieved of its 2014 gross profit budget.

Thus, I have conservatively assumed that Syngenta would have made gross profit budget on the AZ Products-at-Issue "but for" the Defendants' infringement of the '076 and '256 Patents. This assumption is conservative because Syngenta achieved of its 2014 budgets for Crop Protection Fungicides and all products, respectively. Additionally, the Producer Price Index for Agricultural and Commercial Pesticides and Chemicals increased from 2013 to 2014, ²⁰¹ which implies that prices of similar products economy-wide increased in 2014. Thus, if other benchmarks were used, they would likely reflect even greater lost profits.

⁽SYN 287760); (SYN 283412).

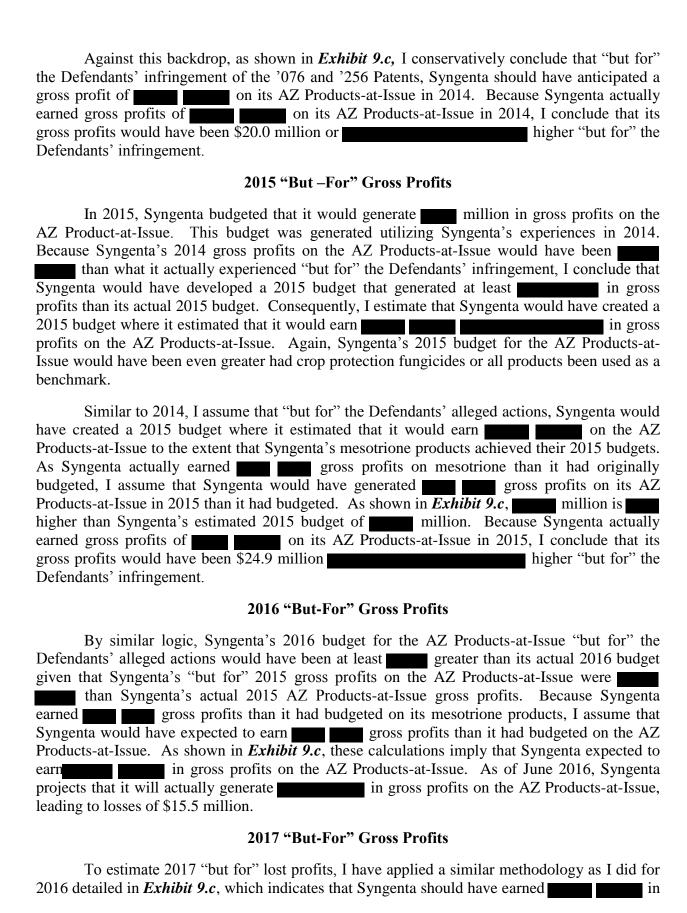
(SYN 283412).

(SYN 283412).

(SYN 283412).

(SYN 283412).

²⁰¹ Producer Price Index by Industry: Pesticide and Other Agricultural Chemical Manufacturing: Agricultural and Commercial Pesticides and Chemicals (fred.stlouisfed.org/series/PCU3253203253201).



gross profits on the AZ Products-at-Issue. As of June 2016, Syngenta projects that it will actually generate in gross profits in 2017 on the AZ Products-at-Issue, leading to losses of \$15.3 million.

Convoyed Sales

As discussed above, Trivapro is a mixture of Trivapro A and Trivapro B. I understand these products are packaged together and are used in combination to obtain the benefits marketed under the Trivapro brand. Additionally, one could separately purchase Trivapro A. Because Trivapro A does not contain azoxystrobin, it is not included in the AZ Products-at-Issue. However, if Syngenta's sales of the AZ Products-at-Issue were greater, so would its sales of Trivapro A, even though it does not contain chemicals related to the patents at issue. The lost sales of Trivapro A would be called convoyed sales. I have conservatively excluded Syngenta's losses from Trivapro A from my damages calculations.

In addition, growers sometimes mix azoxystrobin with other products like insecticides and herbicides. Consequently, if Syngenta lost azoxystrobin sales because of the Defendants' infringement of the '076 Patent and the '256 Patent, it also lost sales on other insecticide and herbicide products. These losses would also be convoyed sales. Although Syngenta is entitled to regain the profits it lost on these convoyed sales, I have conservatively excluded these sales from my lost profits analysis as well. However, I reserve the right to update this report to reflect Syngenta's lost profit damages related to convoyed sales of Trivapro A as well as its insecticide and herbicide products.

Incremental Costs

Gross profits are calculated by deducting the cost of manufacturing the products from the revenue earned on those products. Syngenta bore other costs associated with the AZ Products-at-Issue. Some of these costs are incremental, while some are fixed. Based upon my own analysis and conversations with Syngenta personnel, I classified these costs as either incremental (i.e., variable) or fixed. Because Syngenta does not allocate the additional incremental costs to each product sold, I have calculated these costs as a percentage of gross profits. For example, a Syngenta document indicates it bore additional incremental costs of of gross profits related to sales in 2015. As shown in *Exhibit 9.b*, I have assumed the same level of incremental expenses for all historical and for all future years.

Lost Profits

Syngenta's lost profits are calculated by deducting the additional incremental costs from Syngenta's "but for" lost gross profits. *Exhibit 9.b* shows that after these deductions, Syngenta's "but for" lost profits from the Defendants' infringement of the '076 and '256 Patents in years 2014 – 2017 was \$20.0 million, \$24.9 million, \$15.4 million, and \$15.3 million, respectively.

I have calculated and provided lost profits even after the expiration of the '076 and '256 Patents because, as mentioned above, lost profits damages are not always limited to the infringement period and Willowood's infringement had a lingering effect that led to future lost

(SYN 287820).

Page 34

Subject to Protective Order Attorneys' Eyes Only

profits for Syngenta after patent expiration. I understand that Willowood admits that at least Willowood USA, LLC infringed the '076 and '256 Patents before these patents expired by importing azoxystrobin into the United States in early 2013 and using that azoxystrobin technical by having it formulated and tested to support its end-use registrations of Azoxy 2SC and AzoxyProp Xtra. 203 These infringing actions allowed Willowood to gain early access to the azoxystrobin market by as much as a year, such that Willowood was offering for sale and selling Azoxy 2SC and AzoxyProp Xtra by July 2014. An assumption of a one-year "head start" is conservative for several reasons. For example, Willowood itself characterizes its registration process as "unique" and touts that it can register a product and bring it to market in about 12 months, whereas other competitors take significantly longer. 204 Thus, had Willowood waited until the '076 and '256 Patents expired before importing azoxystrobin technical and carrying out its formulation and testing activities, it would have likely taken Willowood until 2015 or later to introduce its end-use azoxystrobin products (assuming Willowood did not infringe on any other Syngenta patents). I also understand it takes a significant amount of time to gain individual state approvals to sell azoxystrobin products. Additionally, as I discuss above in Section II.B, Willowood likely would have missed the peak selling season for the 2015 crop year had it not infringed on Syngenta's '076 and '256 Patents.

Exhibit 9.e graphs Syngenta's "but for" and actual incremental profits for the AZ Products-at-Issue for 2012 through 2017, assuming infringement of the '076 and '256 Patents. This Exhibit shows that Syngenta's "but for" incremental profits in a given year are roughly similar to Syngenta's actual profits in the preceding year. That is consistent with the Defendants having received approximately a one year "head start" in marketing and selling azoxystrobin and indicates that the effect of this "head start" continues to linger.

Exhibit 9.a displays the losses Syngenta faced due to the Defendants' infringement of the '076 and '256 Patents by year and cumulatively.

For the reasons I discuss above, I believe to a reasonable degree of economic certainty that the Defendants caused the losses displayed in *Exhibit 9.a*. Moreover, as I set forth in Section II.C.2, I do not believe Cheminova, Albaugh, or any other generic had an effect on Syngenta's damages. However, to be conservative, I recognize that the Finder of Fact could conclude that Cheminova could have had an effect on Syngenta's damages. *Exhibit 10.a* displays Syngenta's "but for" losses due to the Defendants if the Finder of Fact draws such a conclusion. The calculations in *Exhibit 10.a* are identical to those in *Exhibit 9.a*, except that I have proportionally allocated Syngenta's lost gross profits based upon the relative import shares of kilograms of azoxystrobin of Cheminova and Willowood.²⁰⁵ This assumption is conservative given Cheminova's limited competitive effects as discussed in Section II.C.2.

²⁰³ Defendants' Second Supplemental Non-Infringement Noninfringment and Invalidity Contentions, dated June 27, 2016, pp. 2 and 7-8; Defendants' Responses to Plaintiff's First Set of Requests for Admission, dated July 29, 2016, pp. 4-5.

²⁰⁴ Deposition of Brian Heinze, dated August 4, 2016, pp. 119-122; Willowood Management Presentation (WW026466).

²⁰⁵ This methodology is akin to the proportional allocation of the infringer's sales methodology detailed in State Industries, Inc. v. Mor-flo Industries, Inc. and American Appliance Mfg. Corp., 883 F.2d 1573 (Fed. Cir. 1989).

Some of the lost profits shown in *Exhibit 9.a* and *Exhibit 10.a*, I have separately calculated and adjusted Syngenta's lost profits to include prejudgment interest, ²⁰⁶ utilizing North Carolina's statutory prejudgment interest rate of 8.0% simple interest. ²⁰⁷ For ease of analysis, I have calculated prejudgment interest through July 1, 2017 and December 31, 2017. I reserve the right to update these interest calculations as trial approaches.

B. Lost Profits from the Defendants' Alleged Infringement of the '138 Patent

This section calculates damages assuming the Finder of Fact determines that the Defendants infringed Syngenta's '138 Patent by importing, using, selling, or offering for sale azoxystrobin that was made using the claimed process before the '138 Patent expired on December 8, 2015. This section calculates damages in such an instance. The damages calculated in this section are applicable regardless of whether the Defendants are found to have infringed any of Syngenta's '076, '256, and '761 Patents.

Panduit Factors 1 - 3

As with my analysis of the '076 and '256 Patents, I have applied the four-factor *Panduit* test (discussed above) to determine the damages stemming from the infringement of the '138 Patent. For the same reasons as in Sections IV.A.1-3, I conclude:

- Demand existed for the azoxystrobin manufactured using the method of the '138 Patent, which I understand is the most commercially reasonable method. I understand that it might be possible to manufacture azoxystrobin without the claimed method of the '138 Patent; however, it would be more expensive and inefficient to do so.²⁰⁸ I understand that Syngenta alleges that Willowood willfully infringed on '138 Patent. This further supports my opinion about the uneconomic nature of alternative processes to manufacture azoxystrobin without infringing the '138 Patent;
- Customers who purchased azoxystrobin from the Defendants likely would have purchased from Syngenta in absence of the Defendants' product; and
- Syngenta had the manufacturing and marketing capacity to make additional sales.

²⁰⁶ Prejudgment interest is a rate of interest applied to an award to compensate the injured party, here Syngenta, for the use of its monies between the infringement date and the judgment date.

North Carolina General Assembly, Enacted Legislation, Chapter 24 – Interest. (www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).

 $^{^{208}}$ Even if a generic was able to manufacture azoxystrobin without the '138 Patent, lost profit damages would be no less than the amounts calculated in the prior section for infringement of the '076 and '256 Patents.

Calculating "But-For" and Lost Profits

Consequently, only the profits Syngenta would have made "but for" the Defendant's alleged infringement of the '138 Patent need to be calculated under the *Panduit* factors. Utilizing the benchmark method, I conclude, based on discussions with Syngenta personnel and my own analysis that a combination of Syngenta's 1) actual gross profits for AZ Products-at-Issue and 2) budgets and actual sales of Crop Protection Fungicides provides a proper benchmark for estimating Syngenta's sales of AZ Products-at-Issue "but for" the Defendants' alleged infringement of the '138 Patent.

For the same reasons I discuss in Section IV.A.4.a, Syngenta's budgets are an informative benchmark for what sales and profits would have been for Syngenta's AZ Products-at-Issue had the '138 Patent not been infringed. However, I understand that Syngenta developed its budgets for the AZ Products-at-Issue under the belief that there might be some amount of azoxystrobin generic entry the industry in 2014. The results of this budgeting process would be incorrect if the Finder of Fact determines that the Defendants infringed on the '138 Patent, in which case Syngenta would have been entitled to exclude the Defendants from importing, using, selling, or offering for sale technical and end-use azoxystrobin through the expiration of the '138 Patent on December 8, 2015. Consequently, in this section, I estimate what budgets Syngenta would have developed for the AZ Products-at-Issue in years 2014 – 2017 assuming it had known that it would have been able to exclude Willowood from using the claimed process until December 8, 2015.

Again, as with my analysis of damages due to infringement of the '076 and '256 Patents, the AZ Products-at-Issue contain azoxystrobin made by the patented process of the '138 Patent as well as other compounds. I have not seen any way in which the AZ Products-at-Issue could have been economically manufactured without the method of the '138 Patent. Willowood's alleged willful infringment further supports my opinion about the uneconomic nature of alternative processes to manufacture azoxystrobin without infringing the '138 Patent. As a result, the entire market value rule is satisfied. I reserve the right to update this conclusion if I am presented with additional evidence.

Unlike in my analysis of lost profits due to the alleged infringement of the '076 and '256 Patents, I find that mesotrione is likely an over-conservative benchmark in calculating lost profits due to infringement of the '138 Patent. Notably, Syngenta's data exclusivity over mesotrione ended on June 4, 2014, whereas Syngenta was entitled to exclude others from using the claimed process of the '138 Patent until December 8, 2015, eighteen months later. Thus, my analysis of the damages due to infringement of the '138 Patent is based on Syngenta's gross profits on sales of Crop Protection Fungicides, which contain products for which Syngenta maintained exclusivity through 2015. As a result, lost profit damages would be no less than the amounts calculated in the prior section for infringement of the '076 and '256 Patents, which used a mesotrione benchmark.

²⁰⁹ As discussed above, my definition of Syngenta's Crop Protection Fungicides excludes products with azoxystrobin.

2014 "But-For" Gross Profits

Syngenta's 2014 actual gross profits on its Crop Protection Fungicides were than its 2013 actual gross profits of those chemicals. Consequently, I have assumed that Syngenta's 2014 gross profits on the AZ Products-at-Issue would have been than its actual 2013 gross profits on the AZ Products-at-Issue, as shown in *Exhibit 11.c*, "but for" the Defendants' alleged infringement of the '138 Patent.

2015 "But-For" Gross Profits

Similarly, because Syngenta's 2015 gross profits on its Crop Protection Fungicides were than its 2014 actual gross profits of those chemicals, I have calculated in *Exhibit 11.c* that Syngenta's 2015 gross profits on the AZ Products-at-Issue would have been than its expected 2014 gross profit budget on the AZ Products-at-Issue.

2016 "But-For" Gross Profits

Assuming the Finder of Fact determines that the Defendants infringed the '138 Patent, Syngenta would have lost its ability to exclude others from practicing the claimed process of the '138 Patent in December 2015. Because 2016 would have been the first year that Syngenta would not have had such exclusivity, I assume that Syngenta's 2016 experiences with the AZ Products-at-Issue in the "but for" scenario would have been similar to Syngenta's actual experience in the first year it did not effectively have exclusivity over the azoxystrobin compound. As discussed above, in the actual scenario, the Defendants' actions caused Syngenta to lose effective exclusivity over the azoxystrobin compound in 2014. Because Syngenta's gross profits on the AZ Products-at-Issue actually by in 2014 from 2013, I have assumed that in the "but for" scenario, Syngenta's 2016 gross profits would have by .210 As set forth in *Exhibit 11.c*, I understand there was a to a level of general decline in the agricultural economy in 2014. Consequently, my estimate of Syngenta's "but for" 2016 gross profits is conservative because the agricultural economy is not expected to contract in 2016 as it did in 2014. If anything, to the extent the economic decline in 2014 had any impact on Syngenta's azoxystrobin sales that year, it would make my estimate of Syngenta's "but-for" 2016 gross profits all that more conservative.

2017 "But-For" Gross Profit

Because 2017 would be the second year Syngenta would not have had exclusivity over the azoxystrobin compound in the "but for" scenario and Syngenta's gross profits on the AZ Products-at-Issue actually by in 2015, the second year Syngenta effectively did not have exclusivity over the azoxystrobin compound, I have assumed that Syngenta's expected gross profits would have by in 2017 to in the "but for" scenario.

Convoyed Sales

Syngenta is entitled to lost profit damages related to its convoyed sales of Trivapro A as well as its insecticides and herbicides that are often mixed with the AZ Products-at-Issue.

Page 38

Subject to Protective Order Attorneys' Eyes Only

²¹⁰ This assumption is conservative as the agricultural economy is not expected to contract as much in 2016 as it did in 2014.

However, I conservatively excluded these sales from my lost profits analysis. I reserve the right to update this report to reflect Syngenta's lost profit damages related to convoyed sales of Trivapro A as well as its insecticide and herbicide products.

Incremental Costs

As discussed above in Section IV.A.4.c, Syngenta bore additional incremental costs of of gross profits on its sales in 2015; I have assumed these costs will continue into 2016 and 2017, and I conservatively include these costs in all years prior to 2015.

Lost Profits

Exhibit 11.b shows that after deducting the additional incremental costs, Syngenta's lost profits from the Defendants' infringement of the '138 Patent in 2014 – 2017 was \$33.2 million, \$55.8 million, \$36.0 million, and \$10.5 million, respectively.

I have calculated and provided lost profits even after the expiration of the '138 Patent because, as mentioned above, lost profits damages are not always limited to the infringement period and Willowood's infringement had a lingering effect that led to future lost profits of Syngenta after patent expiration. If the Finder of Fact determines Willowood infringed the '138 Patent, Willowood's infringing actions enabled it to gain premature access to the azoxystrobin market of over two years (covering the period between August 13, 2013 EPA application to the expiration of the '138 Patent on December 8, 2015 and conservatively excluding the time it takes to obtain individual state approval).

Exhibit 11.e graphs Syngenta's "but for" and actual incremental profits for the AZ Products-at-Issue for 2012 through 2017 assuming infringement of the '138 Patent. This Exhibit shows that Syngenta's "but for" incremental profits in a given year are roughly similar to the Syngenta's actual profits two years before given the two years of growth Syngenta would have achieved in 2014 and 2015. This result is consistent with the Defendants receiving an approximately two year "head start" in marketing and selling azoxystrobin and that the effect of this "head start" continues to linger.

*Exhibit 11.***a** displays the resulting losses Syngenta faced due to the Defendants' infringement of the '138 Patent by year and cumulatively. ²¹¹

For the reasons I discuss above, I believe to a reasonable degree of economic certainty that the Defendants are the cause of the losses displayed in *Exhibit 11.a*. However, I recognize that the Finder of Fact could conclude that Cheminova could have had an effect on Syngenta's damages. *Exhibit 12.a* displays Syngenta's losses due to the Defendants if the Finder of Fact draws such a conclusion. The calculations in *Exhibit 12.a* are identical to those in *Exhibit 11.a*, except that I have proportionally allocated Syngenta's lost gross profits based upon the relative import shares of kilograms of active ingredient of Cheminova and Willowood. ²¹² This

²¹¹ As shown in *Exhibit 11.a*, the lost profits are calculated from 2014 through 2017 and total \$135.5 million. Alternatively, if the Finder of Fact determines infringement ceased December 8, 2015 when the '138 patent expired, then the cumulative damages are equal to the 2014 damages plus 93.7% of the 2015 damages shown in *Exhibit 11.a*.

²¹² This methodology is akin to the proportional allocation of the infringer's sales methodology detailed in State Industries, Inc. v. Mor-flo Industries, Inc. and American Appliance Mfg. Corp., 883 F.2d 1573 (Fed. Cir. 1989).

assumption is conservative given Cheminova's limited competitive effects as discussed in Section II.C.2. Additionally, I have conservatively excluded 2017 damages from this calculation.

Some of the lost profits shown in *Exhibit 11.a* and *Exhibit 12.a* occurred in the past and some will occur in the future. Thus, in *Exhibit 11.a* and *Exhibit 12.a*, I have separately calculated and adjusted Syngenta's lost profits to include prejudgment interest, ²¹³ utilizing North Carolina's statutory prejudgment interest rate of 8.0% simple interest. ²¹⁴ For ease of analysis, I have calculated prejudgment interest through July 1, 2017 and December 31, 2017. I reserve the right to update these interest calculations as trial approaches.

C. Lost Profits from the Defendants' Infringement of the '761 Patent

This section calculates damages assuming the Finder of Fact determines that the Defendants infringe on the '761 Patent by importing, using, selling, or offering for sale azoxystrobin that was made using the claimed process of the '761 Patent. ²¹⁵ This section calculates damages in such an instance. This calculated damages in this section are applicable regardless of whether the Defendants are found to have infringed any of Syngenta's '076, '256, and '138 Patents.

Panduit Factors 1 - 3

As discussed in Sections IV.A.1 - 3 and III.B, Syngenta meets the first three *Panduit* factors for the '761 Patent. I then calculate Syngenta's lost profits assuming infringement of the '761 Patent in a similar manner to my calculation of lost profits assuming infringement of the '138 Patent and the entire market value rule is satisfied.

Calculating "But-for" and Lost Profits

Section IV.B discusses and *Exhibit 11.c* shows that I utilize a different calculation methodology for calculating damages for infringement of the '138 Patent in different time periods. I used one methodology for 2014 and 2015 when the '138 Patent entitled Syngenta to exclude others from using the claimed process; I used another methodology for 2016 through 2017 when '138 Patent had expired and Syngenta no longer possessed such exclusivity.

Because the '761 Patent remains in effect for the entire 2014 - 2017 period and beyond, I have utilized the same methodology as I did in calculating Syngenta's 2014 and 2015 lost profits for infringement of the '138 Patent to calculate Syngenta's 2014 - 2017 lost profits for the infringement of the '761 Patent.

²¹³ Prejudgment interest is a rate of interest applied to an award to compensate the injured party, here Syngenta, for the use of its monies between the infringement date and the judgment date.

North Carolina General Assembly, Enacted Legislation, Chapter 24 – Interest. (www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).

²¹⁵ Even if a generic was able to manufacture azoxystrobin without the '761 Patent, lost profit damages would be no less than the amounts calculated in the prior section for infringement of the '076 and '256 Patents.

2014 & 2015 "But-For" Gross Profits

Exhibit 13.c shows that using the same methodology discussed in Section IV.B for 2014 and 2015, Syngenta suffered lost gross profits of \$33.2 million and \$55.9 million in 2014 and 2015, respectively from the Defendants' infringement of the '761 Patent.

2016 "But-For" Gross Profits

For 2016, I assume that Syngenta would have developed a gross profit for the AZ Products-at-Issue of had it realized that it was entitled to exclude Willowood in 2016. As set forth in *Exhibits 13.c and 13.d*, this amount is than Syngenta's expected 2015 budget for the AZ Products-at-Issue because Syngenta's latest projection in June 2016 of actual gross profits for all Crop Protection Fungicides was than 2015 actual gross profits of those chemicals.

2017 "But-for" Gross Profits

As set forth in *Exhibit 13.c*, for 2017, I have assumed that Syngenta would have developed a 2017 expected gross profit budget for the AZ Products-at-Issue of had it realized that it was entitled to exclude Willowood in 2017. This amount is than Syngenta's expected 2016 gross profits budget for the AZ Products-at-issue because Syngenta's latest June projection in June 2016 of gross profit actuals for all Crop Protection Fungicides by over actual the 2016 June latest projection.

Convoyed Sales

Moreover, as discussed above, Syngenta is entitled to lost profit damages related to its convoyed sales of Trivapro A as well as its insecticides and herbicides that are sometimes mixed with the AZ Products-at-Issue. However, I have conservatively excluded these sales from my lost profits analysis. I reserve the right to update this report to reflect Syngenta's lost profit damages related to convoyed sales of Trivapro A as well as its insecticide and herbicide products.

Incremental Costs

Also, as I discuss above in Section IV.A.4.c, *Exhibit 13.b* shows that Syngenta bore additional incremental costs of of gross profits on sales in 2015. I have conservatively assumed that Syngenta will bear these additional incremental costs in future years, and I also included these costs in all historical years.

Lost Profits

Exhibit 13.b shows that after deducting the additional incremental costs, Syngenta's lost profits from the Defendants' infringement of the '761 Patent in 2014 – 2017 was \$33.2 million, \$55.8 million, \$94.6 million, and \$89.8 million, respectively.

As discussed previously, a plaintiff's lost profits damages are not always limited to the infringement period. Assuming the Finder of Fact determines Willowood infringed the '761 Patent, Willowood's infringing actions enabled it to gain access to the azoxystrobin market over 15 years in advance of all other generic manufacturers (given that the '761 patent expires in April 2029) allowing Willowood to obtain significant sales during key months. Although

Page 41

Subject to Protective Order Attorneys' Eyes Only

Willowood obtained a sizeable head start over its generic competitors, I have conservatively limited my damage calculations to the period between 2014 and 2017.

Exhibit 13.a displays the losses Syngenta faced due to the Defendants' infringement of the '761 Patent by year and cumulatively.

For the reasons I discuss above, I believe to a reasonable degree of economic certainty that the Defendants caused the losses displayed in *Exhibit 13.a*. However, I recognize that the Finder of Fact may conclude that Cheminova caused some of these losses. *Exhibit 14.a* displays Syngenta's losses due to the Defendants if the Finder of Fact draws such a conclusion. The calculations in *Exhibit 14.a* are identical to those in *Exhibit 13.a*, except that I have proportionally allocated Syngenta's lost gross profits based upon the relative import shares of kilograms of active ingredient of Cheminova and Willowood. This assumption is conservative given Cheminova's limited competitive effects as discussed in Section II.C.2.

Some of the lost profits shown in *Exhibit 13.a* and *Exhibit 14.a* occurred in the past and some will occur in the future. Thus, in *Exhibit 13.a* and *Exhibit 14.a*, I have separately calculated and adjusted Syngenta's lost profits to include prejudgment interest, ²¹⁷ utilizing North Carolina's statutory prejudgment interest rate of 8.0% simple interest. ²¹⁸ For ease of analysis, I have calculated prejudgment interest through July 1, 2017 and December 31, 2017. I reserve the right to update these interest calculations as trial approaches.

D. The Defendants' Unjust Enrichment Arising from their Alleged Copyright Infringement

In this matter, Syngenta alleges that the Defendants copied portions of Syngenta's Quadris Flowable Fungicide label and Syngenta's Quilt Xcel label. These allegedly copied labels were placed on the Defendants' Azoxy 2SC and AzoxyProp Xtra products. As discussed above and confirmed by Dr. Wichert, portions of the labels the Defendants allegedly copied are vital to the underlying product; it is difficult to make product sales without such an effective label. Similarly, Dr. Clark explained that the labels tell Syngenta's story to the grower about how to utilize the fungicide and how the product fits the grower's needs. Using a label that has been copied from another manufacturer also could provide an improper quality assurance to fungicide purchasers. As noted above, Dr. Rogers wrote that "diffusion scholars have found relative advantage to be one of the strongest predictors of an innovation's rate of adoption."

²¹⁶ This methodology is akin to the proportional allocation of the infringer's sales methodology detailed in State Industries, Inc. v. Mor-flo Industries, Inc. and American Appliance Mfg. Corp., 883 F.2d 1573 (Fed. Cir. 1989).

²¹⁷ Prejudgment interest is a rate of interest applied to an award to compensate the injured party, here Syngenta, for the use of its monies between the infringement date and the judgment date.

North Carolina General Assembly, Enacted Legislation, Chapter 24 – Interest. (www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).

²¹⁹ Deposition of Rex Wichert, dated July 15, 2016, pp. 74-75, 116-117, 197-198, and 257.

²²⁰ Deposition of Adora Clark, dated July 22, 2016, p. 20.

²²¹ Rogers, Everett M. Diffusion of Innovations, 5th Edition, 2003, p. 233 (SYN 290147-55).

Drafting a label that indicates to the public that generic products, like the Defendants', have the same characteristics as the branded company's product lessens the relative advantage gap faced by the generic.

It is my understanding that the copying of the labels occurred prior to the Defendants' first sale of Azoxy 2SC on July 12, 2014 and AzoxyProp Xtra on December 29, 2014. 222 I also understand that since the filing of this lawsuit, the Defendants edited their Azoxy 2SC label, which the EPA approved on February 8, 2016, and Defendants also edited their AzoxyProp Xtra label, which the EPA approved on December 10, 2015. 223 I understand that Defendants made these edits in an attempt to avoid infringing on the copyrights of Syngenta's labels and that Syngenta disputes that the edits resolve Defendants' copyright infringement. 224 Regardless, the copyright infringement likely continued after the edited labels were approved because I am not aware of the Defendants recalling products with the infringing labels. Further, the EPA allowed Willowood to distribute the allegedly infringing labels on the Azoxy 2SC product and the AzoxyProp Xtra product in the market for up to 18 months after February 8, 2016 and December 10, 2015, respectively. 225 Consequently, the alleged infringement could cease only when the Defendants' products with the infringing labels are no longer available for sale. For the purpose my analysis, I have conservatively assumed that the copyright infringement will cease on August 8, 2017 for the Azoxy 2SC product labels and on June 10, 2017 for the AzoxyProp Xtra product labels (including the 18-month grace period the Defendants had to remove the allegedly infringing content). I reserve the right to update this assumption upon receipt of new information.

Alternatively, the Finder of Fact could determine that the Defendants garnered all of their technical azoxystrobin, Azoxy 2SC, AzoxyProp Xtra, and Tebustrobin SC sales because of the copyrighted material they copied from Syngenta. *Exhibit 15* displays the Defendants' actual sales of these products through June 13, 2016 as well as the sales of these products I project to make in the second half of 2016 and 2017. As shown in *Exhibit 5*, Willowood produced monthly sales data for Azoxy 2SC and AzoxyProp Xtra through June 13, 2016. To project the sales shown in *Exhibit 15* in 2016, I annualized the 2016 monthly product sales. For 2017, I applied the percentage sales decline projected between 2016 and 2017 as shown in the Willowood USA Management Presentation. I conservatively do not project sales of technical azoxystrobin and Tebustrobin SC. Willowood's sales (and profits) would be larger in *Exhibit 15* if I considered future technical azoxystrobin and Tebustrobin SC sales.

²²² Willowood Sales Data.

²²³ EPA Approval of Azoxy 2SC Label Amendment, dated February 8, 2016 (SYN 289460-524); EPA Approval of AzoxyProp Xtra Label Amendment, dated December 10, 2015 (WW021447).

²²⁴ Submission of AzoxyProp Xtra Label Amendment, dated May 21, 2015 (WW018540).

²²⁵ EPA Approval of Azoxy 2SC Label Amendment, dated February 8, 2016 (SYN 289460-524); EPA Approval of AzoxyProp Xtra Label Amendment, dated December 10, 2015 (WW021447); 40 C.F.R. §152.130(c) (permitting registrants to use previously approved labeling for a period of 18 months after approval of voluntarily amended label); Existing Stocks Policy, 56 Fed. Reg. 29362.

²²⁶ Tebustrobin sales go through July 20, 2016.

²²⁷ Willowood USA Management Presentation (WW026503).

Similar to Syngenta, Willowood sells herbicides and insecticides that growers can mix with its azoxystrobin products. Therefore, if Willowood unjustly obtained azoxystrobin sales, it likely also unjustly obtained sales of other insecticide and herbicide products. I have conservatively excluded these convoyed sales from my damage analysis. However, I reserve the right to update this report to incorporate such sales.

Exhibit 15 shows the technical azoxystrobin, Azoxy 2SC, AzoxyProp Xtra, and Tebustrobin SC sales that the Defendants unjustly received, by year and cumulatively, because of their alleged copyright infringement for 2014 through 2017. I reserve the right to update these calculations upon receipt of new information and for the passage of time.

Even though the Defendants have the burden of proof, I have estimated the costs that the Defendants incurred to make the sales listed in *Exhibit 15*. In particular, I have applied Willowood's net direct income margin to its Azoxy 2SC and AzoxyProp Xtra infringing sales for 2014 through 2017 to estimate the net profits the Defendants garnered because of their alleged copyright infringement. To estimate profits on technical azoxystrobin and Tebustrobin SC, I have applied Willowood's average annual direct income margin of its Azoxy 2SC and AzoxyProp Xtra products. I reserve the right to update this assumption upon receipt of new information and for the passage of time. *Exhibit 15* displays an estimate of the Defendants' unjust enrichment by year and cumulative.

As set forth in *Exhibit 15*, I have separately calculated and adjusted Willowood's unjust enrichment sales and net profits to include prejudgment interest, ²²⁹ utilizing North Carolina's statutory prejudgment interest rate of 8.0% simple interest. ²³⁰ For ease of analysis, I have calculated prejudgment interest through July 1, 2017 and December 31, 2017. I reserve the right to update these interest calculations as trial approaches.

E. Lost Profits from the Defendants' Alleged Copyright Infringement

As I discuss above, the Defendants' alleged copyright infringement commenced before the Defendants' first sale of Azoxy 2SC on July 12, 2014 and AzoxyProp Xtra on December 29, 2014. I have assumed that the alleged infringement ceased on August 8, 2017 for Azoxy 2SC and on June 10, 2017 for AzoxyProp Xtra (18 months after the Defendants modified their labels for these products). Because the alleged infringement ceased over a year after

²²⁸ www.willowoodusa.com/products/by-category/.

²²⁹ Prejudgment interest is a rate of interest applied to an award to compensate the injured party, here Syngenta, for the use of its monies between the infringement date and the judgment date.

North Carolina General Assembly, Enacted Legislation, Chapter 24 – Interest. (www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).

²³¹ Willowood Sales Data.

²³² EPA Approval of Azoxy 2SC Label Amendment, dated February 8, 2016 (SYN 289460-524); EPA Approval of AzoxyProp Xtra Label Amendment, dated December 10, 2015 (WW021447); 40 C.F.R. §152.130(c) (permitting registrants to use previously approved labeling for a period of 18 months after approval of voluntarily amended label); Existing Stocks Policy, 56 Fed. Reg. 29362.

Syngenta's '138 Patent expired (December 8, 2015), I have conservatively assumed that the profits Syngenta lost from the Defendants' alleged copyright infringement equals the profits Syngenta lost from the Defendants' alleged infringement of Syngenta's '138 Patent, which I calculated in Section B above.

F. Summary

Exhibit 16.a summarizes the damages results for the infringement claims discussed in Sections A – E above and in Exhibits 9 - 15. Exhibit 16.b displays these damages by year. Exhibits 16.c and 16.d display the damages results, after accounting for prejudgment interest through July 1, 2017 and December 31, 2017.

Exhibits 17.a - 17.d are similar to *16.a - 16.d* except they conservatively allocate some of Syngenta's losses to Cheminova's actions.

If the Finder of Fact determines that the Defendant is liable for multiple actions, the resulting damages would be the maximum of the losses for the actions deemed to be infringing.

V. Conclusion

Syngenta alleges that the Defendants infringed on four of their patents and two of their copyrighted labels. These alleged actions allowed the Defendants to enter the industry prematurely. Syngenta, other branded strobilurin manufacturers, and other generic azoxystrobin manufacturers reacted to the Defendants' actions, which lowered Syngenta's profits and enriched the Defendants.

As detailed in this Report, if the Finder of Fact determines the Defendants' actions are improper, I find that Syngenta's damages are between \$75.7 million and \$273.4 million, with prejudgment interest, damages are between \$85.7 million and \$297.9 million. If it is determined that the Defendants infringed on Syngenta's patents, I find that Syngenta's lost profit damages are between \$75.7 million and \$273.4.2 million (\$85.7 million to \$297.9 million, with prejudgment interest). If the Finder of Fact determines that the Defendants infringed on Syngenta's copyrights, the damages would be \$135.5 million (\$155.3 million with prejudgment interest).

August 19, 2016

Benjamin S. Wilner, Ph.D.

Berolllibres

I. Pleadings, Legal Filings

Beginning Bates	Ending Bates	Document Description
-	-	Complaint, dated March 27, 2015 (including exhibits)
-	-	Answer of Defendants Willowood, LLC, Willowood USA, LLC and Willowood Azoxystrobin, LLC to the Complaint, dated June 16, 2015
-	-	Answer of Defendant Willowood Limited to the Complaint, dated October 28, 2015
-	-	Defendants' Answers and Objections to Plaintiff's Fourth Set of Interrogatories, dated July 14, 2016
-	-	Defendants' Responses to Syngenta Crop Protection's Third Set of Interrogatories, dated June 2, 2016
-	-	Defendant's Second Supplemental Non-Infringement and Invalidity Contentions, dated June 27, 2016
-	-	Defendant's Responses to Plaintiff's First Set of Requests for Admission (Nos. 1-34), dated July 29, 2016
-	-	Plaintiff Syngenta Crop Protection, LLC's Second Supplemental Infringement Contentions, dated July 2016
-	-	Expert Report of Dr. Joseph M. D. Fortunak, August 19, 2016

II. Deposition Transcripts

Beginning Bates	Ending Bates	Document Description
-	-	Deposition of Rex Wichert, dated July 15, 2016 (including exhibits)
-	-	Deposition of Jeff Cecil, dated July 13, 2016 (including exhibits)
-	-	Deposition of Brian Heinze, dated August 4, 2016 (including exhibits)
-	-	Deposition of Adora Clark, dated July 22, 2016 (including exhibits)
-	-	Deposition of Brad Reichman, dated July 25, 2016 (including exhibits)
-	-	Deposition of Robert Andrew Fisher, dated July 22, 2016 (including exhibits)
-	-	Deposition of Joseph Middione, dated July 26, 2016 (including exhibits)

III. Documents Produced by Willowood

Beginning Bates	Ending Bates	Document Description
WW000057	WW000060	Willowood AzoxyProp Xtra Sales Summary, January 1, 2014 through December 7, 2015
WW000061	WW000096	Willowood Sales Invoices of AzoxyProp Xtra, December 29, 2014 through June 19, 2015
WW000097	WW000125	Willowood Sales Invoices of AzoxyProp Xtra, June 19, 2015 through July 27, 2015
WW000126	WW000133	Willowood Azoxy 2SC Sales Summary, January 1, 2014 through December 7, 2015
WW000134	WW000166	Willowood Sales Invoices of Azoxy 2SC, June 2, 2015 through July 16, 2015
WW000167	WW000210	Willowood Sales Invoices of Azoxy 2SC, July 17, 2015 through November 18, 2015
WW010305	WW010309	Email between Brian Heinze and Joe Middione on July 8, 2015
WW012046	WW012046	Willowood Azoxy 2SC - United Turf Alliance (UTA) Proposal
WW018540	WW018623	Pyxis Regulatory Consulting Letter to EPA re: Willowood AzoxyProp Xtra Submission of a Non-PRIA Fast Track Label Amendment, dated May 21, 2015
WW020109	WW020117	Email from Joseph Middione to Brian Heinze on March 26, 2014

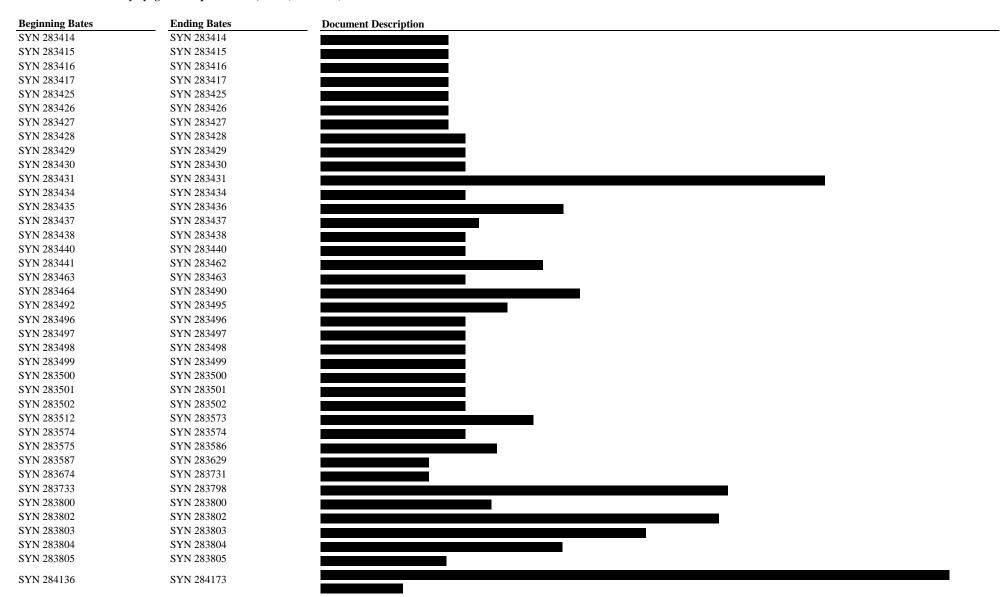
III. Documents Produced by Willowood (Continued)

Beginning Bates	Ending Bates	Document Description
WW021447	WW021483	EPA Letter to Pyxis Regulatory Consulting re: Label Amendment for Willowood AzoxyProp Xtra, dated December 10, 2015
WW025053	WW025053	Email from Brian Heinze to Joe Middione, et al, on December 23, 2013
WW026223	WW026237	
WW026255	WW026273	
WW026277	WW026279	Willowood Azoxy 2SC Sales Summary, December 8, 2015 through June 21, 2016
WW026280	WW026282	Willowood AzoxyProp Xtra Sales Summary, December 8, 2015 through June 21, 2016
WW026381	WW026397	
WW026430	WW026508	Willowood USA Management Presentation
WW026509	WW026553	Willowood Sales Invoices of Azoxy 2SC, April 4, 2014 through June 13, 2016
WW026554	WW026597	Willowood Sales Invoices of Azoxy 2SC, December 17, 2015 through April 13, 2016
WW026598	WW026623	Willowood Sales Invoices of Azoxy 2SC, December 18, 2015 through March 31, 2016
WW026624	WW026653	Willowood Sales Invoices of AzoxyProp Xtra, April 5, 2016 through April 29, 2016
WW026654	WW026686	Willowood Sales Invoices of AzoxyProp Xtra, May 2, 2016 through June 13, 2016
WW026687	WW026688	Willowood Sales Invoices of Azoxy Technical to Innvictus, dated April 24, 2015 and December 25, 2015
WW026689	WW026691	Willowood Sales Summary & Invoices of Tebustrobin SC to AgXplore II, dated July 18, 2016 and July 20, 2016
WW026692	WW026692	Willowood Paid Rebates Summary by Year and Customer, 2014-2016

IV. Documents Produced by Syngenta Crop Protection, LLC

Beginning Bates	Ending Bates	Document Description	
SYN 026718	SYN 026740		
SYN 036816	SYN 036816		
SYN 037154	SYN 037174		
SYN 037471	SYN 037473		
SYN 038212	SYN 038213		
SYN 038709	SYN 038709		
SYN 056311	SYN 056312		
SYN 058305	SYN 058306		
SYN 058805	SYN 058805		
SYN 059143	SYN 059144	Email from Matt Heinze to Bret Horner on July 08, 2015	
SYN 061003	SYN 061003		
SYN 061668	SYN 061677		
SYN 062113	SYN 062122		
SYN 134640	SYN 134642		
SYN 279541	SYN 279569	Syngenta Quilt Xcel EPA Label	
SYN 283371	SYN 283381		
SYN 283391	SYN 283411		
SYN 283412	SYN 283412		
SYN 283413	SYN 283413		

IV. Documents Produced by Syngenta Crop Protection, LLC (Continued)



IV. Documents Produced by Syngenta Crop Protection, LLC (Continued)

SYN 284174 SYN 284188 SYN 284201 SYN 284202 SYN 284207 SYN 284208 SYN 284221 SYN 284222 SYN 284223 SYN 284224 SYN 284227 SYN 284228 SYN 284238 SYN 284238 SYN 284238 SYN 284238 SYN 284238 SYN 284273 SYN 284273 SYN 28755 SYN 287750 SYN 287756 SYN 287757 SYN 287750 SYN 287750 SYN 287750 SYN 287750 SYN 287760 SYN 287760 SYN 287818 SYN 287817 SYN 287818 SYN 287818 SYN 287810 SYN 287810 SYN 287818 SYN 287820 SYN 287818 SYN 287820 SYN 287820 SYN 287830 SYN 287830 SYN 287830 SYN 287830 SYN 287830 SYN 289331 Liberty Crop Protection Liberty 3 Way EPA label SYN 289322 SYN 289334 SYN 289344 SYN 289355 SYN 289394 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289375 SYN 289395 SYN 289394 Innvictis Crop Care Trevo Prop EPA label SYN 289375 SYN 289375 SYN 289395 SYN 289395 SYN 289341 Syngenta Callisto EPA Label	
SYN 284188 SYN 284201 SYN 284202 SYN 284207 SYN 284208 SYN 284221 SYN 284222 SYN 284223 SYN 284224 SYN 284227 SYN 284238 SYN 284258 SYN 284273 SYN 284273 SYN 287740 SYN 287755 SYN 287756 SYN 287759 SYN 287760 SYN 287760 SYN 287817 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289322 SYN 289333 SYN 28934 SYN 289369 SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label Innvictis Crop Care Trevo Prop EPA label Innvictis Crop Care Trevo Prop EPA label Innvictis Crop Care Trevo Prop EPA label	
SYN 284208 SYN 284221 SYN 284222 SYN 284223 SYN 284224 SYN 284227 SYN 284228 SYN 284237 SYN 284238 SYN 284258 SYN 287740 SYN 287755 SYN 287756 SYN 287757 SYN 287759 SYN 287759 SYN 287760 SYN 287817 SYN 287817 SYN 287818 SYN 287820 SYN 287820 SYN 287820 SYN 287820 SYN 289316 SYN 289321 SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289349 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394	
SYN 284222 SYN 284224 SYN 284224 SYN 284227 SYN 284228 SYN 284238 SYN 284238 SYN 284283 SYN 284273 SYN 284283 SYN 287740 SYN 287755 SYN 287756 SYN 287757 SYN 287759 SYN 287760 SYN 287817 SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 284222 SYN 284224 SYN 284224 SYN 284227 SYN 284228 SYN 284238 SYN 284238 SYN 284283 SYN 284273 SYN 284283 SYN 287740 SYN 287755 SYN 287756 SYN 287757 SYN 287759 SYN 287760 SYN 287817 SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 284228 SYN 284237 SYN 284238 SYN 284258 SYN 284273 SYN 284283 SYN 287740 SYN 287755 SYN 287756 SYN 287757 SYN 287759 SYN 287760 SYN 287760 SYN 28780 SYN 287817 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289334 SYN 289369 SYN 289375 SYN 289394 Innvictis Crop Care Trevo EPA label	
SYN 284238 SYN 284258 SYN 284273 SYN 284283 SYN 287740 SYN 287755 SYN 287756 SYN 287757 SYN 287759 SYN 287759 SYN 287760 SYN 287760 SYN 287817 SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 284273 SYN 287750 SYN 287756 SYN 287757 SYN 287759 SYN 287759 SYN 287760 SYN 287760 SYN 287817 SYN 287818 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 287740 SYN 287755 SYN 287756 SYN 287757 SYN 287759 SYN 287759 SYN 287760 SYN 287760 SYN 287817 SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 287756 SYN 287757 SYN 287759 SYN 287759 SYN 287760 SYN 287760 SYN 287817 SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 287759 SYN 287760 SYN 287810 SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 287760 SYN 287817 SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 287817 SYN 287818 SYN 287818 SYN 287820 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 287818 SYN 287820 SYN 287820 SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 287820 SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 28934 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 289305 SYN 289315 United Turf Alliance ArmorTech Zoxy 2 SC EPA label SYN 289316 SYN 289321 Albaugh ArmorTech Zoxy-T EPA label SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 289316SYN 289321Albaugh ArmorTech Zoxy-T EPA labelSYN 289322SYN 289333Liberty Crop Protection Liberty 3 Way EPA labelSYN 289334SYN 289369Innvictis Crop Care Trevo EPA labelSYN 289375SYN 289394Innvictis Crop Care Trevo Prop EPA label	
SYN 289322 SYN 289333 Liberty Crop Protection Liberty 3 Way EPA label SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 289334 SYN 289369 Innvictis Crop Care Trevo EPA label SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 289375 SYN 289394 Innvictis Crop Care Trevo Prop EPA label	
SYN 289395 SYN 289431 Syngenta Callisto EPA Label	
DITY 207373 DITY 207431 DYNGCHAI CAIHSIO LI A LAOCI	
SYN 289432 SYN 289459 Syngenta Zemax EPA Label	
SYN 289460 SYN 289524 EPA Approval of Azoxy 2SC Label Amendment, dated February 8, 2016	
SYN 289525 SYN 289529 Product Label for #: 74054-7	
SYN 289530 SYN 289586 Product Label for #: 42750-261	
SYN 289587 SYN 289592 Product Label for #: 42750-262	
SYN 289593 SYN 289611 Product Label for #: 42750-284	
SYN 289612 SYN 289636 Product Label for #: 42750-285	
SYN 289637 SYN 289672 Product Label for #: 42750-289	
SYN 289673 SYN 289707 Product Label for #: 42750-290	
SYN 289708 SYN 289721 Product Label for #: 42750-291	
SYN 289722 SYN 289734 Product Label for #: 42750-292	
SYN 289735 SYN 289740 Product Label for #: 42750-297	
SYN 289741 SYN 289747 Product Label for #: 264-770	
SYN 289748 SYN 289897 Jackson, Daniel L. and Kedrowski, Kathleen M. "Calculating Intellectual Property Infringement Damages," AICPA, 2013	
SYN 289898 SYN 289972 Pollack, Richard A., Scott M. Bouchner, Craig M. Enos, Colin A. Johns and John D. Moyl "Calculating Lost Profits" AICPA, 2006	
SYN 289973 SYN 289994 Product Label for #: 279-3442	
SYN 289995 SYN 290001 Product Label for #: 4787-65	

IV. Documents Produced by Syngenta Crop Protection, LLC (Continued)

Beginning Bates	Ending Bates	Document Description
SYN 290002	SYN 290062	Product Label for #: 67760-124
SYN 290063	SYN 290097	Product Label for #: 67760-130
SYN 290098	SYN 290102	Product Label for #: 81964-5
SYN 290103	SYN 290133	Product Label for #: 53883-343
SYN 290134	SYN 290146	Product Label for #: 53883-358
SYN 290147	SYN 290155	Rogers, Everett M. Diffusion of Innovations, 5th Edition, 2003
SYN 290156	SYN 290168	Product Label for #: 352-840
SYN 290169	SYN 290185	Product Label for #: 10163-332
SYN 290186	SYN 290190	Product Label for #: 89966-2
SYN 290191	SYN 290199	Product Label for #: 71532-34
SYN 290200	SYN 290270	Product Label for #: 71532-35
SYN 290271	SYN 290289	Product Label for #: 34704-934
SYN 290290	SYN 290340	Product Label for #: 34704-1068
SYN 290341	SYN 290366	Product Label for #: 66222-250
SYN 290367	SYN 290372	Product Label for #: 35935-101
SYN 290373	SYN 290423	Product Label for #: 228-720
SYN 290424	SYN 290494	Product Label for #: 228-721
SYN 290495	SYN 290529	Product Label for #: 228-722
SYN 290530	SYN 290555	Product Label for #: 228-724
SYN 290556	SYN 290572	Product Label for #: 55146-147
SYN 290573	SYN 290578	Product Label for #: 55146-149
SYN 290579	SYN 290584	Product Label for #: 55146-150
SYN 290585	SYN 290614	Product Label for #: 83529-49
SYN 290615	SYN 290634	Product Label for #: 60063-57
SYN 290651	SYN 290655	Product Label for #: 100-1140
SYN 290656	SYN 290695	Product Label for #: 100-1161
SYN 290696	SYN 290748	Product Label for #: 100-1324
SYN 290749	SYN 290790	Product Label for #: 100-1466
SYN 290791	SYN 290829	Product Label for #: 100-1480
SYN 290830	SYN 290873	Product Label for #: 100-1098
SYN 290874	SYN 290895	Product Label for #: 100-1178
SYN 290896	SYN 290935	Product Label for #: 100-1471
SYN 290936	SYN 290992	Product Label for #: 33270-32
SYN 290993	SYN 291060	Product Label for #: 89118-3
SYN 291126	SYN 291184	Product Label for #: 87290-44
SYN 291185	SYN 291217	Product Label for #: 87290-56
SYN 291255	SYN 291270	Product Label for #: 67760-129
SYN 291271	SYN 291271	

V. Documents Produced by Third Party

Beginning Bates	Ending Bates	Document Description
ALB 000001	ALB 0000005	
CPS000001	CPS000001	
FMC00000001	FMC0000710	
FMC00000713	FMC00000715	
GOW-000001	GOW-000004	
LARIAT00003444	LARIAT00003445	
LARIAT00004282	LARIAT00004285	
LARIAT00004341	LARIAT00004343	
LARIAT00011266	LARIAT00011269	
LARIAT0001160	LARIAT0001161	
LARIAT00012925	LARIAT00012925	
LARIAT00013138	LARIAT00013138	
LARIAT00013374	LARIAT00013374	
LPI000001	LPI000001	
PINN 0001	PINN 0663	
REI00000001	REI00000122	
TPS00000005	TPS00000005	
TPS00000820	TPS00000821	
TPS00001332	TPS00001332	
TPS00001550	TPS00001581	
USI00000294	USI00000360	
WIN 000001	WIN 000011	
WIN 000012	WIN 000012	

VI. Other Information Considered

Beginning Bates	Ending Bates	Document Description
-	-	U.S. Copyright Registration TX0007992684 (http://www.copyright.gov/records/)
-	-	U.S. Copyright Registration TX0007994113 (http://www.copyright.gov/records/)
-	-	U.S Trademark Serial Number 85373576 (http://www.uspto.gov/trademarks-application-process/search-trademark-database)
-	-	U.S. Patent No. 8,124,761B2 (http://www.uspto.gov/patents-application-process/search-patents)
-	-	U.S. Patent No. 5,847,138 (http://www.uspto.gov/patents-application-process/search-patents)
-	-	U.S. Patent No. 5,602,076 (http://www.uspto.gov/patents-application-process/search-patents)
-	-	U.S. Patent No. 5,633,256 (http://www.uspto.gov/patents-application-process/search-patents)
-	-	Syngenta AG Form 20-F, dated February 11, 2016 (http://www4.syngenta.com/~/media/Files/S/Syngenta/media-releases/2015-form-20-f.pdf)
-	-	Adama Agricultural Solutions Ltd, Periodic Report for the Year 2015 (http://www.adama.com/en/Images/2015_annual_report_english_tcm15-81671.pdf)
-	-	NuFarm Annual Report 2015 (http://www.nufarm.com/Assets/31936/1/NufarmAR2015.pdf)
-	-	http://www.syngentacropprotection.com
-	-	http://www.syngenta-us.com/labels/quilt

VI. Other Information Considered (Continued)

Beginning Bates	Ending Bates	Document Description
-	-	http://www.syngenta-us.com/labels/quadris
-	-	http://www.syngenta-us.com/labels/abound-flowable
-	-	http://www.syngenta-us.com/labels/trivapro
-	-	http://www.syngenta-us.com/crops
-	-	http://www.syngentaprofessionalproducts.com/ppmain.aspx
-	-	http://www4.syngenta.com/investors/investors-faq
-	-	http://www.syngentacropprotection.com/quilt-xcel-fungicide?tab=details
-	-	http://www.syngentacropprotection.com/quadris-fungicide?tab=details
-	-	http://www.syngenta-us.com/labels/zemax
-	-	http://www.syngenta-us.com/labels/callisto
-	-	http://www.syngentacropprotection.com/trivapro-fungicide
-	-	http://www.syngentacropprotection.com/elatus?tab=details-(solatenol-fungicide-+-azo)-fungicide
-	-	http://www.willowoodusa.com/products/fungicides/azoxy-2sc/
-	-	http://www.willowoodusa.com/products/fungicides/azoxyprop-xtra/
-	-	http://www.nordersupply.com/images/e0187101/about.htm
-	-	http://www.lgls.com/chemistry/prod/product_view.jsp?ke_gubun=EN&group_code=10&mcategory_seq=18
-	-	http://www.helenachemical.com/about-us/
-	-	http://lanxess.us/en/lanxess-in-the-usa/
-	-	http://www.tide-china.com/en/About.aspx?id=1
-	-	http://www.controlsolutionsinc.com/
-	-	http://www.agprofessional.com/news/Cheminova-launches-Azaka-and-Equation-fungicides-for-US259126991.html
-	-	http://www.gfagrochem.com/aboutus-e.html
-	-	http://www.shardausa.com/about
-	-	http://www.lgls.com/about/company/business/chemistry.jsp
-	-	http://www.nufarm.com/US/AboutUs
-	-	http://albaughllc.com/company/
-	-	http://www.fmccrop.com/grower/Products/Fungicides.aspx
-	-	http://www.mfa-inc.com/AboutUs.aspx
-	-	http://ag.wilburellis.com/Products/Pages/Home.aspx
-	-	http://vivecrop.com/products/
-	-	http://vivecrop.com/products/
-	-	http://www.agribusinessglobal.com/uncategorized/product-profile-mesotrione/
-	-	http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=2732461
-	-	http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=117472488
-	-	http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=118748243
-	-	http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=4583604
-	-	http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=41315534.
-	-	http://www.bloomberg.com/profiles/companies/0132004D:US-gowan-co-llc
-	-	http://www.bloomberg.com/news/articles/2014-09-08/fmc-to-buy-cheminova-for-1-8-billion-as-ceo-modifies-strategy
-	-	http://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=4321020

VI. Other Information Considered (Continued)

Beginning Bates	Ending Bates	Document Description
=	-	http://www.agribusinessglobal.com/agrichemicals/fungicides/product-profile-azoxystrobin/
-	-	http://www.prnewswire.com/news-releases/syngenta-receives-epa-registration-for-breakthrough-fungicide-solatenol-300135791.html
-	-	http://www.pinnacleagholdings.com/company/about
-	-	http://phx.corporate-ir.net/phoenix.zhtml?c=117919&p=irol-homeProfile&t=&id=&
-	-	http://news.agropages.com/News/NewsDetail7112.htm
-	-	http://www.prnewswire.com/news-releases/makhteshim-agan-to-re-brand-global-business-as-adama-242342531.html
-	-	https://www.nass.usda.gov/Charts_and_Maps/graphics/data/pricecn.txt
-	-	https://www.nass.usda.gov/Charts_and_Maps/graphics/data/pricesb.txt
-	-	https://www.nass.usda.gov/Charts_and_Maps/graphics/data/pricewh.txt
-	-	http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/net-cash-income.aspx
-	-	http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter_C4.pdf
-	-	http://npirspublic.ceris.purdue.edu/ppis/Default.aspx
-	-	https://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1
-	-	http://researchinformation.Co.Uk/Pest/2001/B106300F.Pdf
-	-	http://www.dupont.com/content/dam/assets/industries/agriculture/assets/cp_PSD-95_K-27702-1.pdf
-	-	https://www.pwc.com/gx/en/international-transfer-pricing/assets/itp-2013-final.pdf
		EPA's response re: Petition for Extension of the Exclusive Use Data Protection Period for Mesotrione (EPA Reg. No. 100-1140) to June 4, 2014
-	-	(www.epa.gov/sites/production/files/2014-04/documents/mesotrione-response.pdf)
-	-	http://www.copyright.gov/title17/92chap5.html#504
-	-	https://www.dmreztrak.com/default.aspx
		Georgia-Pacific Corp. v. United States Plywood Corp., 318 F.Supp 1116 (S.D.N.Y. 1970), modified, 446 F.2d 295 (Second Cir. 1970), cert. denied, 505
-	-	U.S. 870 (1971)
-	-	Lucent Techs., Inc. v. Gateway Inc., 580 F.3d 1301 (Fed. Cir. 2009)
-	-	Panduit Corp. v. Stahlin Bros. Fibre Works, Inc 575 F.2d 1152, 1164 n.11 (6th Cir. 1978)
-	-	State Industries, Inc. v. Mor-flo Industries, Inc. and American Appliance Mfg. Corp., 883 F.2d 1573 (Fed. Cir. 1989)
-	-	35 U.S.C. §284
-	-	40 C.F.R. §152.130(c)
-	-	Existing Stocks Policy, 56 Fed. Reg. 29362



Alvarez & Marsal Disputes and Investigations, LLC 540 West Madison Street – Suite 1800

> Chicago, IL 60661 Phone: +1 312 601 4220 Fax: +1 312 332 4599

Benjamin S. Wilner, Ph.D.

Managing Director – Disputes and Investigations bwilner@alvarezandmarsal.com

540 West Madison St. Suite 1800 Chicago, IL 60661 Tel: (312) 470-8450

Education

Kellogg Graduate School of Management, Northwestern University Ph.D. Managerial Economics and Decision Science

University of Pennsylvania BA magna cum laude with distinction in major Economics & Mathematics

London School of Economics General Course Degree Mathematics & Statistics Dr. Benjamin Wilner has more than twenty years of advisory, valuation, and general economic & financial services experience as a consultant, academic & testifier. He is a Ph.D. economist and statistician who regularly serves as a consultant and testifying expert witness on financial damages, economic & statistical issues.

Dr. Wilner's disputes experience encompasses many industries and a broad range of single plaintiff, class action and criminal disputes including antitrust liability & damages, business interruption, business valuations, economic analyses, intellectual property, labor, lost income, product liability, statistical data analyses, and other corporate and litigation related matters.

In his consulting practice, Dr. Wilner advises corporations and governments on economic and statistical issues. For example, in addition to redesigning statistical aspects of an automobile manufacturer's warranty process, Dr. Wilner received a special commendation from the Commissioner of US Customs & Border Protection for building an economic model to restructure a \$2.5 billion tariff, which has won praise by a Cabinet member, Congressional officials, and the industry.

Prior to joining Alvarez & Marsal, Dr. Wilner worked at other multinational consulting firms. He also has been a professor in the business schools at the University of Michigan, University of Iowa, Northwestern University, and the Helsinki School of Economics. Dr. Wilner was a research assistant for a Nobel Prize—winning economist and studied under two other Nobel Laureates. His work has been published in leading academic journals, textbooks and the popular press as well as regularly cited in the academic and popular press. Dr. Wilner won several awards for teaching and research including a grant from the National Science Foundation.

Testimony before a Trier of Fact

- Trial Testimony in The People of the State of Illinois v. Ronald A. Pieri, State of Illinois, Circuit Court of Lake County, October 2015
- Trial Testimony in Sleepy's LLC, v. Select Comfort Wholesale Corporation, et al., United States District Court, Eastern District of New York, May – June 2012 & July 2015
- Trial Testimony in Grater, Inc., and James T. Zavacki v. Kevin T. Keating and Keating & Shure, Ltd., State of Illinois, Circuit Court of Cook County, March 2015
- Trial Testimony in Think Tank Software Development Corporation et al. v. Chester Inc., et al., State of Indiana, County of Porter, March 2014
- Trial Testimony in Sharon P. Clark, Commissioner of the Kentucky Department of Insurance, in her Capacity as Rehabilitator of AIK Comp v. TransAmerica Insurance Company and TIG Insurance Company, Commonwealth of Kentucky, Franklin Circuit Court, Division Two, October 2012
- Trial Testimony in Mario Vara v. Integra Properties, Inc., Abe Polatsek, S&M Corporation and Michael Strick, State of Illinois, Circuit Court of Cook County, July 2011
- Trial Testimony in Indeck Power Equipment Company v. Professional Power Products, et al., State of Illinois, Circuit Court of Cook County, April 2010
- Trial Testimony in Saint-Gobain Autover USA, Inc., et al. v. Xinyi Glass North America, Inc., et al., United States District Court, Northern District of Ohio, Eastern Division, November 2009
- Trial Testimony in NSM Music Group, Ltd. and NSM Music, Inc. v. Synergy Law Group and Arthur E. Mertes, State of Illinois, Circuit Court of Cook County, June 2009
- Arbitration Testimony in Global Link Logistics, Inc., GLL Holdings, Inc., and Golden Gate Logistics, Inc., v. Olympus Growth Fund III, L.P., et al., American Arbitration Association, October 2008
- Arbitration Testimony in Sarah Sanford v. Society of Actuaries & Bruce Schobel, American Arbitration Association, August 2008
- Hearing Testimony in Chinitz v. Chinitz, State of Michigan, Circuit Court for the County of Oakland, May 2008
- Arbitration Testimony in BP Products North America, Inc. v. Laidlaw Educational Services, JAMS Arbitration, October 2007



Deposition Testimony

- In re: Hardieplank Fiber Cement Siding Litigation, United States District Court, District of Georgia, February 2016
- In re: Atlas Roofing Corporation Chalet Shingle Products Liability Litigation, United States District Court, Northern District of Georgia, December 2015
- Churchill Downs Incorporated v. Illinois Department of Revenue, Brian Hamer, as Director of The Illinois Department of Revenue, and Dan Rutherford as Treasurer of the State of Illinois, State of Illinois, Circuit Court of Cook County, August 2014
- Victor Tracy, Power of Attorney for Anne Tracy and Victor Tracy, Individually v. Robert K. Erickson, M.D., Lake County Neurosurgery, LLC, Advocate Condell Medical Center, State of Illinois, Circuit Court of Cook County, July 2014
- Marylee Arrigo v. Link Stop, Inc., et al., United States District Court, Western District of Wisconsin, October 2013
- Andrew C. Dillon v. Transportation Solutions Group, LLC, Freight Exchange of North America, LLC, 3PLogic, LLC, Transportation Solutions Enterprises, LLC and Todd Berger, United States District Court, Northern District of Illinois, Eastern Division, September 2013
- Grater, Inc., and James T. Zavacki v. Kevin T. Keating and Keating & Shure, Ltd., State of Illinois, Circuit Court of Cook County, September 2013
- Think Tank Software Development Corporation et al. v. Chester Inc., et al., State of Indiana, County of Porter, February 2012 & October 2009
- Continental Datalabel, Inc. v. Avery Dennison Corporation, United States District Court, Northern District of Illinois, Eastern Division, December 2011
- Ross v. Ross, Circuit Court of the Nineteenth Judicial Circuit, Waukegan, Lake County, Illinois, September 2011
- In re: IKO Roofing Shingle Products Liability Litigation, United States District Court, Central District of Illinois, Urbana Division, August 2011
- Jessica Ellen Legens, et al. v. Mark Alan Ikerman and Manheim Services Corporation, d/b/a Manheim Gateway St. Louis, et al., State of Illinois, Circuit Court of Madison County, November 2010
- Ronald Seymour v. Wausau Signature Agency, et al., United States District Court, Northern District of Illinois, Eastern Division, May 2010
- Neil Simon and Clarissa Simon v. Heritage Title Company, State of Illinois, Circuit Court of Cook County, December 2009



Benjamin S. Wilner, Ph.D. Page 4

- Mario Vara v. Integra Properties, Inc., Abe Polatsek, S&M Corporation and Michael Strick, State of Illinois, Circuit Court of Cook County, December 2009
- Saint-Gobain Autover USA, Inc., et al. v. Xinyi Glass North America, Inc., et al., United States District Court, Northern District of Ohio, Eastern Division, October 2009
- Sleepy's LLC, v. Select Comfort Wholesale Corporation, et al., United States District Court, Eastern District of New York, July 2009
- Indeck Power Equipment Company v. Professional Power Products, et al., State of Illinois, Circuit Court of Cook County, September 2008
- NSM Music Group, Ltd. and NSM Music, Inc. v. Synergy Law Group and Arthur E. Mertes, State of Illinois, Circuit Court of Cook County, May 2008
- Maria Belbis, et al. v. County of Cook, United States District Court, Northern District of Illinois, Eastern Division, January 2008
- Bucyrus International, Inc. v. Price Erecting Company and Kentucky Rebuild Corp., State of Wisconsin, Circuit Court of Milwaukee County, October 2007
- Mark A. Sindecuse, M.D. v. Dean M. Katsaros, Katsaros & Associates, and CIB Marine Bancshares, Inc., United States District Court, Eastern District of Missouri, Eastern Division, June 2007
- Quentin Bullock et al., v. Michael Sheahan and Cook County, United States District Court, Northern District of Illinois, Eastern Division, September 2006

Publications

- "The U.S. Federal Crop Insurance Program in 2012 and Beyond," (with Frank Schnapp) Trébol, July 2013
- "Profitability & Effectiveness of the Federal Crop Insurance Program," (with Laura Carolan & Frank Schnapp), Crop Insurance Today, 44(2), pp. 28 – 32, May 2011
- "Economic and Accounting Analyses in Post-Acquisition Disputes," (with Allen Burt and Matthew Paye) The SRR Journal, Spring 2010
- "Statistical Analyses Relation to Reductions In Force," The SRR Journal, Spring 2009
- "Antitrust Analyses in Horizontal Mergers," (with Thomas R. Jackson) The SRR Journal, Fall 2007
- "Options Backdating: The Latest Corporate Imbroglio," (with Idris Raja) The SRR Journal, Spring 2007 (reprinted on mondaq.com)



Benjamin S. Wilner, Ph.D. Page 5

- "Multi-Unit Auctions: A Comparison of Static and Dynamic Mechanisms" (with Alejandro Manelli and Martin Sefton), Journal of Economic Behavior and Organization, 61(2), pp. 304 – 323, October 2006
- "The Exploitation of Relationships in Financial Distress: The Case of Trade Credit," Journal of Finance, February 2000
- "Everything you always wanted to know about discounting, but were afraid to ask: A Finance 101 Primer," Credit and Financial Management Review, Summer 1999
- "Paying Your Bills: The Effect of Corporate Quality" September 1996
- Refereed for the American Economic Review, American Real Estate Society, Journal of Finance, the Journal of Business, Finance and Accounting, and John Wiley Publishers

Professional Memberships

- American Bar Association (Associate Status)
- American Statistical Association
- Credit Research Foundation (Research Fellow)
- National Association of Forensic Economists

Awards

- National Science Foundation Grant, 1998
- Old Gold Research Fellowship, University of Iowa, Summer 1997
- Outstanding Professor, University of Iowa Panhellenic Council, Fall 1996
- Doctoral Teaching Award, Kellogg Graduate School of Management, 1994







Month	Line		Azoxy 2SC ¹	AzoxyProp Xtra ¹	Azoxystrobin Technical ²	Tebustrobin SC ³		Total by Month
Jul-14	1	\$	1,584,080	\$ -	\$ -	\$ -	\$	1,584,080
Aug-14	2		262,488	-	-	-		262,488
Sep-14	3		74,772	-	-	-		74,772
Oct-14	4		32,000	-	-	-		32,000
Nov-14	5		28,800	-	-	_		28,800
Dec-14	6		2,438,224	2,508,680	-	-		4,946,904
Jan-15	7		49,000	-	-	-		49,000
Feb-15	8		370,440	39,600	-	-		410,040
Mar-15	9		441,212	517,550	-	-		958,762
Apr-15	10		236,204	32,400	405,000	-		673,604
May-15	11		293,634	1,241,140	-	-		1,534,774
Jun-15	12		(278,530)	(783,220)	-	-		(1,061,750)
Jul-15	13		1,493,100	934,110	-	-		2,427,210
Aug-15	14		208,515	-	-	-		208,515
Sep-15	15		97,070	-	-	-		97,070
Oct-15	16		16,800	-	-	-		16,800
Nov-15	17		65,400	-	-	-		65,400
Dec-15	18		493,020	1,043,100	1,237,500	-		2,773,620
Jan-16	19		129,840	84,600	-	-		214,440
Feb-16	20		90,820	806,810	-	-		897,630
Mar-16	21		1,594,057	613,615	-	-		2,207,672
Apr-16	22		1,043,175	3,502,155	-	-		4,545,330
May-16	23		456,725	432,810	-	-		889,535
Jun-16 (6/1 - 6/13 for Azoxy 2SC & AzoxyProp Xtra)	24		46,640	494,440	-	-		541,080
Jul-16 (7/18 & 7/20 for Tebustrobin SC)	25		n/a	n/a	n/a	34,560		34,560
Total	26	\$	11,267,486	\$ 11,467,790	\$ 1,642,500	\$ 34,560	\$	24,412,336
Subtotals								
2014 (7/12/14 - 12/31/14)	27	\$	4,420,364	\$ 2,508,680	s -	\$ -	\$	6,929,044
2015	28	Ψ	3,485,865	3,024,680	1,642,500	•	Ψ	8,153,045
2016 (1/1/16 - 7/20/16)	29		3,361,257	5,934,430	-	34,560		9,330,247
2016 Annualized	30	\$	7,455,879	\$ 13,163,645	\$ -	\$ 34,560	\$	20,654,084

Notes:

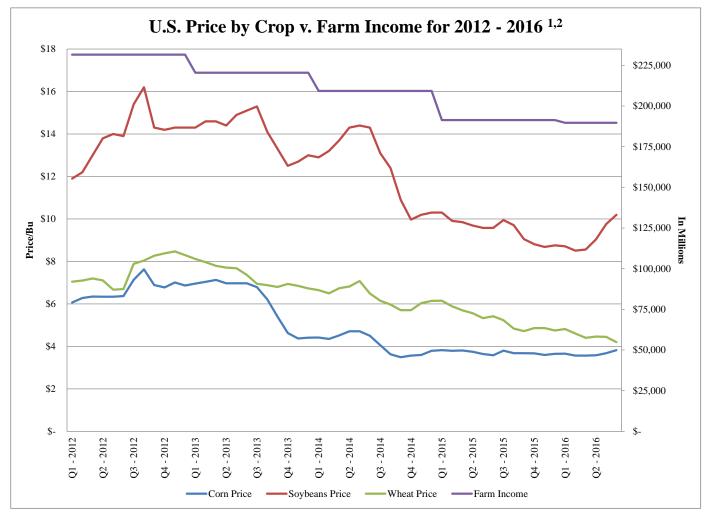
⁽¹⁾ Per Willowood Sales Data (WW000057-60, WW000126-33, WW0026277-79, WW0026280-82 and Defendants' Answers and Objections to Plaintiff's Fourth Set of Interrogatories, dated July 14, 2016). The 2016 sales for Azoxy 2SC and AzoxyProp Xtra were annualized in line 30 by multiplying the daily average of sales from January 1 through June 13, 2016 and multiplying by the 366 days in 2016.

⁽²⁾ Per two Willowood USA, LLC sales invoices for Azoxystrobin Technical to Innvictis Crop Care, LLC (WW026687-88). Amounts were not included in the Willowood Sales Data for sales of Azoxy 2SC and AzoxyProp Xtra.

⁽³⁾ Per two Willowood USA, LLC sales invoices in July 2016 for Tebustrobin SC to AgXplore II (WW026690-91). Amounts were not included in the Willowood Sales Data for sales of Azoxy 2SC and AzoxyProp Xtra. In addition, the 2016 sales of Tebustrobin 2SC were not annualized in line 30 beyond the actual supporting documentation received of sales due to limited history.







- (1) Per http://www.nass.usda.gov and http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/net-cash-income.aspx.
- (2) Farm Income is forecasted for 2015 and 2016.

Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Summary of Syngenta's Lost Profit Damages
Assuming Infringement of the '076 and '256 Patents
\$ in thousands

Lost Profits of AZ Products-at-Issue					
	Line	Source	Formula		Amount
2014	1	Exh. 9.b - Line 4	[a]	\$	20,020
2014 2015	2	Exh. 9.b - Line 8	[b]		24,920
2016	3	Exh. 9.b - Line 12	[c]		15,449
2017	4	Exh. 9.b - Line 16	[d]		15,275
Total	5		[e] = [a] + [b] + [c] + [d]	\$	75,663

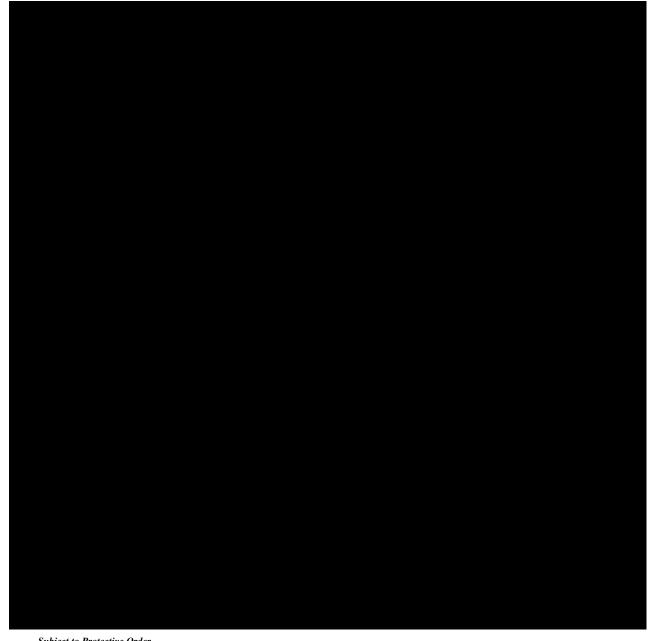
Cumulative Lost Profits of AZ Products-at-Issue					
	Line	Source	Formula		Amount
2014	6		[f] = [a]	\$	20,020
2015	7		[g] = [a] + [b]		44,940
2016	8		[h] = [a] + [b] + [c]		60,388
2017	9		[i] = [a] + [b] + [c] + [d]	\$	75,663

	Lost	Profits of AZ Products-at-Issu	ue with Prejudgment Interest as of July 1, 2017	
	Line	Source	Formula	Amount
2014	10	See Note 1 & 2	[j] = [a] + ([a] * 8.0% * 3.0)	\$ 24,825
2015	11	See Note 1 & 2	[k] = [b] + ([b] * 8.0% * 2.0)	28,907
2016	12	See Note 1 & 2	[1] = [c] + ([c] * 8.0% * 1.0)	16,684
2017	13	See Note 1 & 2	[m] = [d]	15,275
Total	14		[n] = [j] + [k] + [l] + [m]	\$ 85,691

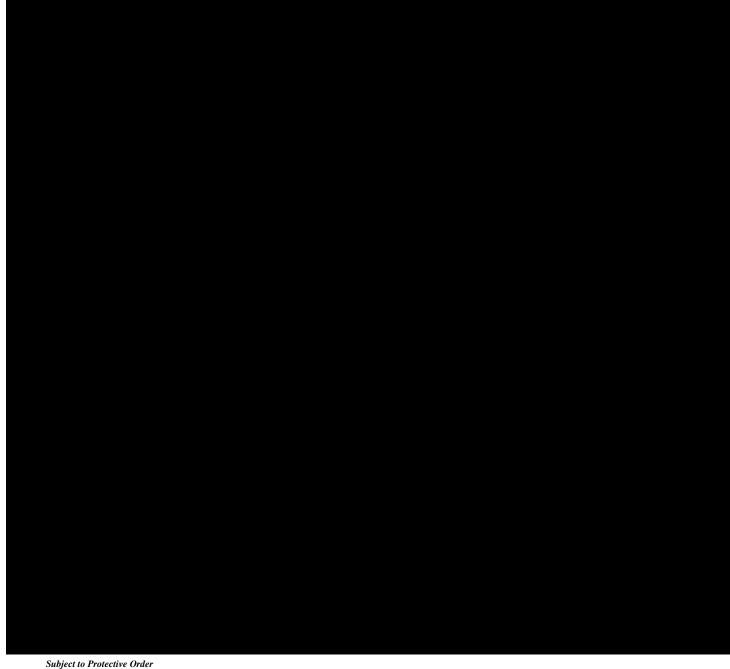
Cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017					
	Line	Source	Formula		Amount
2014	15		[o] = [j]	\$	24,825
2015 2016	16		[p] = [j] + [k]		53,732
2016	17		[q] = [j] + [k] + [l]		70,416
2017	18		[r] = [j] + [k] + [l] + [m]	\$	85,691

Notes:

- (1) Prejudgment Interest is computed for all historical lost profits through July 1, 2017 utilizing North Carolina's statutory prejudgment interest rate (8.0% simple interest; mid-year convention) (http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).
- (2) If the judgment date was December 31, 2017, 4% of each line 1-4 would be added to its corresponding lines 10-13, and the Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 would equal \$25,625, \$29,904, \$17,302, and \$15,886, respectively.



Subject to Protective Order Attorneys' Eyes Only



Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Mesotrione Benchmark Budget vs. Actual Analysis Assuming Infringement of the '076 and '256 Patents \$ in thousands

Exhibit 9.d



Syngenta Crop Protection, LLC v. Willowood, LLC, et al.

AZ Products-at-Issue: "But For" vs. Actual Incremental Profits $^{1,\,2}$

Assuming Infringement of the '076 and '256 Patents

\$ in thousands



Page 70 of 104

Exhibit 9.e

Syngenta Crop Protection, LLC v. Willowood, LLC, et al.
Summary of Syngenta's Lost Profit Damages
Assuming Infringement of the '076 and '256 Patents - Excludes Losses Potentially due to Cheminova \$ in thousands

				Losses due t	
				Willow	ood's Actions
		Lost Profits of	of AZ Products-at-Issue		
	Line	Source	Formula		Amount
2014	1	Exh. 10.b - Line 4	[a]	\$	14,118
2015	2	Exh. 10.b - Line 8	[b]		13,841
2016	3	Exh. 10.b - Line 12	[c]		3,715
2017	4	Exh. 10.b - Line 16	[d]		2,761
Total	5		[e] = [a] + [b] + [c] + [d]	\$	34,435

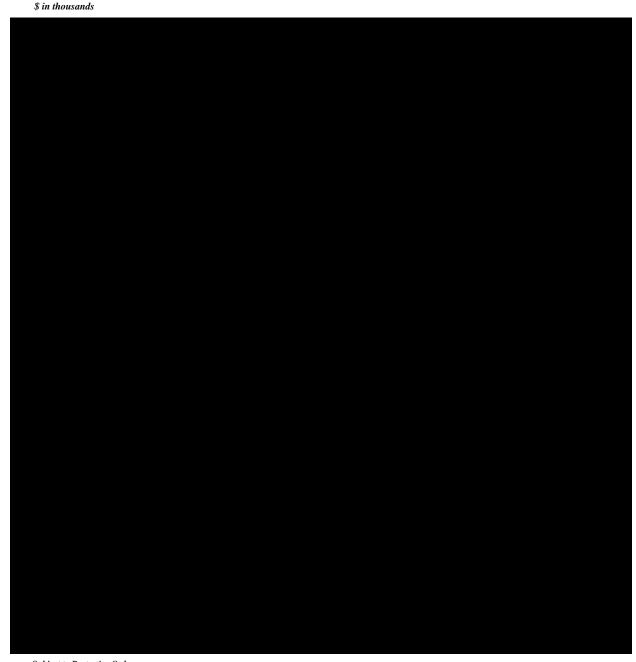
Cumulative Lost Profits of AZ Products-at-Issue					
	Line	Source	Formula		Amount
2014	6		[f] = [a]	\$	14,118
2015	7		[g] = [a] + [b]		27,959
2016	8		[h] = [a] + [b] + [c]		31,674
2017	9		[i] = [a] + [b] + [c] + [d]	\$	34,435

	Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017						
	Line	Source	Formula		Amount		
2014	10	See Note 1 & 2	[j] = [a] + ([a] * 8.0% * 3.0)	\$	17,506		
2015	11	See Note 1 & 2	[k] = [b] + ([b] * 8.0% * 2.0)		16,056		
2016	12	See Note 1 & 2	[1] = [c] + ([c] * 8.0% * 1.0)		4,012		
2017	13	See Note 1 & 2	[m] = [d]		2,761		
Total	14		[n] = [j] + [k] + [l] + [m]	\$	40,335		

	Cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017						
	Line	Source	Formula		Amount		
2014	15		[o] = [j]	\$	17,506		
2015	16		[p] = [j] + [k]		33,562		
2016	17		[q] = [j] + [k] + [l]		37,574		
2017	18		[r] = [j] + [k] + [l] + [m]	\$	40,335		

Notes:

- (1) Prejudgment Interest is computed for all historical lost profits through July 1, 2017 utilizing North Carolina's statutory prejudgment interest rate (8.0% simple interest; mid-year convention) (http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).
- (2) If the judgment date was December 31, 2017, 4% of each line 1-4 would be added to its corresponding lines 10-13, and the Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 would equal \$18,071, \$16,610, \$4,160, and \$2,872, respectively.



Subject to Protective Order Attorneys' Eyes Only

Syngenta Crop Protection, LLC v. Willowood, LLC, et al.
Syngenta's "But For" and Lost Gross Profits for 2014 - 2017
Assuming Infringement of the '076 and '256 Patents - Exclude

Assuming Infringement of the '076 and '256 Patents - Excludes Losses Potentially due to Cheminova \$ in thousands

Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Summary of Syngenta's Lost Profit Damages
Assuming Infringement of the '138 Patent
\$ in thousands

Lost Profits of AZ Products-at-Issue						
	Line	Source	Formula		Amount	
2014	1	Exh. 11.b - Line 4	[a]	\$	33,206	
2015	2	Exh. 11.b - Line 8	[b]		55,802	
2016	3	Exh. 11.b - Line 12	[c]		36,010	
2017	4	Exh. 11.b - Line 16	[d]		10,504	
Total	5		[e] = [a] + [b] + [c] + [d]	\$	135,522	

Cumulative Lost Profits of AZ Products-at-Issue						
	Line	Source	Formula	,	Amount	
2014	6		[f] = [a]	\$	33,206	
2015	7		[g] = [a] + [b]		89,007	
2016	8		[h] = [a] + [b] + [c]		125,018	
2017	9		[i] = [a] + [b] + [c] + [d]	\$	135,522	

	Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017						
	Line	Source	Formula		Amount		
2014	10	See Note 1 & 2	[j] = [a] + ([a] * 8.0% * 3.0)	\$	41,175		
2015	11	See Note 1 & 2	[k] = [b] + ([b] * 8.0% * 2.0)		64,730		
2016	12	See Note 1 & 2	[1] = [c] + ([c] * 8.0% * 1.0)		38,891		
2017	13	See Note 1 & 2	[m] = [d]		10,504		
Total	14		[n] = [j] + [k] + [l] + [m]	\$	155,301		

	Cumulative Lost Pr	rofits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017	
	Line Source	e Formula	Amount
2014	15	[o] = [j] \$	41,175
2015	16	[p] = [j] + [k]	105,905
2016	17	[q] = [j] + [k] + [l]	144,796
2017	18	[r] = [j] + [k] + [l] + [m] \$	155,301

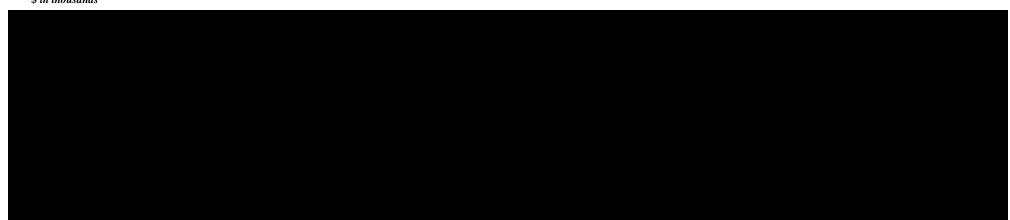
- (1) Prejudgment Interest is computed for all historical lost profits through July 1, 2017 utilizing North Carolina's statutory prejudgment interest rate (8.0% simple interest; mid-year convention) (http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter_24.pdf).
- (2) If the judgment date was December 31, 2017, 4% of each line 1-4 would be added to its corresponding lines 10-13, and the Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 would equal \$42,504, \$66,962, \$40,332, and \$10,925 million, respectively.
- (3) Alternatively, if the Finder of Fact determines infringement ceased December 8, 2015 when the '138 patent expired, then the cumulative damages are equal to the 2014 damages shown in Line 1 plus 93.7% (342 out of 365 days) of the 2015 damages shown in Line 2. For damages with prejudgment interest as of July 1, 2017, the cumulative damages are equal to the 2014 damages shown in Line 10 plus 93.7% (342 out of 365 days) of the 2015 damages shown in Line 11. If the judgment date was December 31, 2017 for this scenario, the cumulative damages would be 103.2% of the 2014 damages shown in Line 10 and 96.9% of the 2015 damages shown in Line 11.





Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Fungicide Benchmark Budget vs. Actual Analysis Assuming Infringement of the '138 Patent \$ in thousands

Exhibit 11.d



Syngenta Crop Protection, LLC v. Willowood, LLC, et al. AZ Products-at-Issue: "But For" vs. Actual Incremental Profits ^{1, 2}

Exhibit 11.e

Assuming Infringement of the '138 Patent

\$ in thousands



Page 78 of 104

Syngenta Crop Protection, LLC v. Willowood, LLC, et al.
Summary of Syngenta's Lost Profit Damages
Assuming Infringement of the '138 Patent - Excluding Losses Potentially Due to Cheminova \$ in thousands

				Los	ses due to		
				Willow	ood's Actions		
	Lost Profits of AZ Products-at-Issue						
	Line	Source	Formula		Amount		
2014	1	Exh. 12.b - Line 4	[a]	\$	23,417		
2015	2	Exh. 12.b - Line 8	[b]		32,121		
2016	3	Exh. 12.b - Line 12	[c]		10,883		
Total	4		[d] = [a] + [b] + [c]	\$	66,420		

Cumulative Lost Profits of AZ Products-at-Issue							
	Line	Source	Formula		Amount		
2014	5		[e] = [a]	\$	23,417		
2015 2016	6		[f] = [a] + [b]		55,537		
2016	7		[g] = [a] + [b] + [c]	\$	66,420		

	Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017						
	Line	Source	Formula		Amount		
2014	8	See Note 1 & 2	[h] = [a] + ([a] * 8.0% * 3.0)	\$	29,037		
2015	9	See Note 1 & 2	[i] = [b] + ([b] * 8.0% * 2.0)		37,260		
2016	10	See Note 1 & 2	[j] = [c] + ([c] * 8.0% * 1.0)		11,753		
Total	11		[k] = [h] + [i] + [j]	\$	78,050		

	Cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017							
	Line	Source	Formula		Amount			
2014	12		[l] = [h]	\$	29,037			
2015	13		[m] = [h] + [i]		66,297			
2016	14		[n] = [h] + [i] + [j]	\$	78,050			

- (1) Prejudgment Interest is computed for all historical lost profits through July 1, 2017 utilizing North Carolina's statutory prejudgment interest rate (8.0% simple interest; mid-year convention) (http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).
- (2) If the judgment date was December 31, 2017, 4% of each line 1-3 would be added to its corresponding lines 8-10, and the Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2016 would equal \$29,973, \$38,545, and \$12,189, respectively.
- (3) Alternatively, if the Finder of Fact determines infringement ceased December 8, 2015 when the '138 patent expired, then the cumulative damages are equal to the 2014 damages shown in Line 1 plus 93.7% (342 out of 365 days) of the 2015 damages shown in Line 2. For damages with prejudgment interest as of July 1, 2017, the cumulative damages are equal to the 2014 damages shown in Line 8 plus 93.7% (342 out of 365 days) of the 2015 damages shown in Line 9. If the judgement date was December 31, 2017 for this scenario, the cumulative damages would be 103.2% of the 2014 damages shown in Line 8 and 96.9% of the 2015 damages shown in Line 9.



Exhibit 12.c



Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Summary of Syngenta's Lost Profit Damages Assuming Infringement of the '761 Patent \$ in thousands

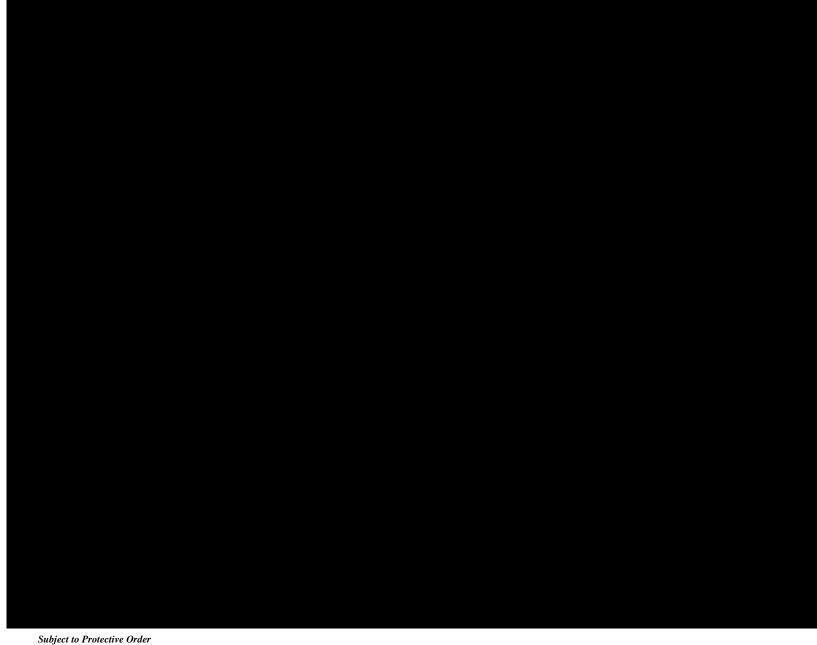
	Lost Profits of AZ Products-at-Issue							
	Line	Source	Formula		Amount			
2014	1	Exh. 13.b - Line 4	[a]	\$	33,206			
2015	2	Exh. 13.b - Line 8	[b]		55,802			
2016	3	Exh. 13.b - Line 12	[c]		94,620			
2017	4	Exh. 13.b - Line 16	[d]		89,790			
Total	5		[e] = [a] + [b] + [c] + [d]	\$	273,418			

	Cumulative Lost Profits of AZ Products-at-Issue						
	Line	Source	Formula		Amount		
2014	6		[f] = [a]	\$	33,206		
2015	7		[g] = [a] + [b]		89,007		
2016 2017	8		[h] = [a] + [b] + [c]		183,627		
2017	9		[i] = [a] + [b] + [c] + [d]	\$	273,418		

	Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017						
	Line	Source	Formula		Amount		
2014	10	See Note 1 & 2	[j] = [a] + ([a] * 8.0% * 3.0)	\$	41,175		
2015	11	See Note 1 & 2	[k] = [b] + ([b] * 8.0% * 2.0)		64,730		
2016	12	See Note 1 & 2	[l] = [c] + ([c] * 8.0% * 1.0)		102,189		
2017	13	See Note 1 & 2	[m] = [d]		89,790		
Total	14		[n] = [j] + [k] + [l] + [m]	\$	297,885		

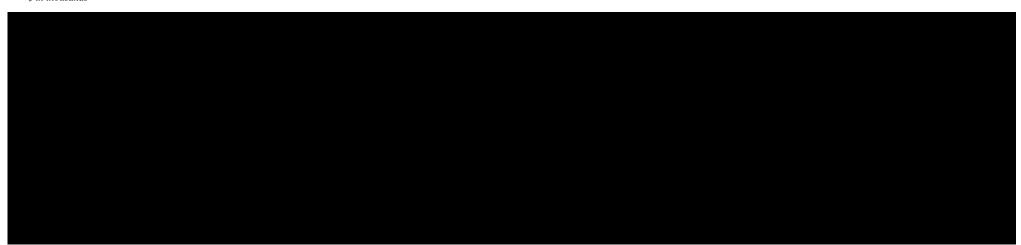
	Cumulativ	e Lost Profits of AZ Prod	lucts-at-Issue with Prejudgment Interest as of July 1, 2017	
	Line	Source	Formula	 Amount
2014	15		[o] = [j]	\$ 41,175
2015	16		[p] = [j] + [k]	105,905
2016	17		[q] = [j] + [k] + [l]	208,095
2017	18		[r] = [j] + [k] + [l] + [m]	\$ 297,885

- (1) Prejudgment Interest is computed for all historical lost profits through July 1, 2017 utilizing North Carolina's statutory prejudgment interest rate (8.0% simple interest; mid-year convention) (http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).
- (2) If the judgment date was December 31, 2017, 4% of each line 1-4 would be added to its corresponding lines 10-13, and the Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 would equal \$42,504, \$66,962, \$105,974, and \$93,382, respectively.





Subject to Protective Order Attorneys' Eyes Only Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Fungicide Benchmark Budget vs. Actual Analysis Assuming Infringement of the '761 Patent \$ in thousands Exhibit 13.d



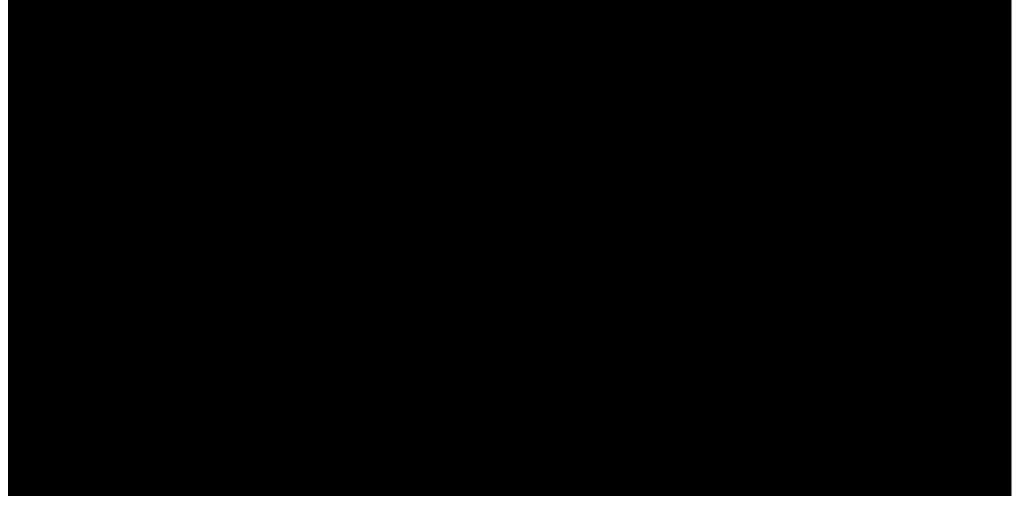
Syngenta Crop Protection, LLC v. Willowood, LLC, et al.

Exhibit 13.e

AZ Products-at-Issue: "But For" vs. Actual Incremental Profits ^{1,2}

Assuming Infringement of the '761 Patent

\$ in thousands



Page 86 of 104

Syngenta Crop Protection, LLC v. Willowood, LLC, et al.
Summary of Syngenta's Lost Profit Damages
Assuming Infringement of the '761 Patent - Excluding Losses Potentially Due to Cheminova \$ in thousands

				Los	sses due to
				Willow	ood's Actions
		Lost Profits	s AZ Products-at-Issue		
	Line	Source	Formula		Amount
2014	1	Exh. 14.b - Line 4	[a]	\$	23,417
2015	2	Exh. 14.b - Line 8	[b]		32,121
2016	3	Exh. 14.b - Line 12	[c]		45,362
2017	4	Exh. 14.b - Line 16	[d]		29,887
Total	5		[e] = [a] + [b] + [c] + [d]	\$	130,786

	Cumulative Lost Profits of AZ Products-at-Issue										
	Line	Source	Formula		Amount						
2014	6		[f] = [a]	\$	23,417						
2014 2015	7		[g] = [a] + [b]		55,537						
2016	8		[h] = [a] + [b] + [c]		100,899						
2017	9		[i] = [a] + [b] + [c] + [d]	\$	130,786						

	Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017												
	Line	Source	Formula		Amount								
2014	10	See Note 1 & 2	[j] = [a] + ([a] * 8.0% * 3.0)	\$	29,037								
2015	11	See Note 1 & 2	[k] = [b] + ([b] * 8.0% * 2.0)		37,260								
2016	12	See Note 1 & 2	[1] = [c] + ([c] * 8.0% * 1.0)		48,991								
2017	13	See Note 1 & 2	[m] = [d]		29,887								
Total	14		[n] = [j] + [k] + [l] + [m]	\$	145,174								

	Cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest as of July 1, 2017										
	Line	Source	Formula		Amount						
2014	15		[o] = [j]	\$	29,037						
2015	16		[p] = [j] + [k]		66,297						
2016	17		[q] = [j] + [k] + [l]		115,288						
2017	18		[r] = [j] + [k] + [l] + [m]	\$	145,174						

Notes:

- (1) Prejudgment Interest is computed for all historical lost profits through July 1, 2017 utilizing North Carolina's statutory prejudgment interest rate (8.0% simple interest; mid-year convention) (http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).
- (2) If the judgment date was December 31, 2017, 4% of each line 1-4 would be added to its corresponding lines 10-13, and the Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 would equal \$29,973, \$38,545, \$50,806, and \$31,082, respectively.

Subject to Protective Order Attorneys' Eyes Only





			Willowood Sales					Willo	wood Net Dire	ect Income Perce	entage		Willow	ood Net Direct I		
				AzoxyProp					AzoxyProp	Azoxystrobin			AzoxyProp	Azoxystrobin		Total
Year	Line Source	Formula	Azoxy 2SC	Xtra	Technical	SC	Azoxystrobin	Azoxy 2SC	Xtra	Technical	SC	Azoxy 2SC	Xtra	Technical	SC	Azoxystrobin
									Unjust E	nrichment						
2014	1 Exhibit 5 - Line 27; See Note 1	[a]	\$ 4,420,364	\$ 2,508,680	\$ -	\$ -	\$ 6,929,044	50.7%	47.3%	49.5%	49.5%	\$ 2,242,780	\$ 1,185,479	\$ -	\$ -	\$ 3,428,259
2015	2 Exhibit 5 - Line 28; See Note 1	[b]	3,485,865	3,024,680	1,642,500	-	8,153,045	50.7%	47.3%	49.1%	49.1%	1,768,639	1,429,315	806,790	-	4,004,745
2016	3 Exhibit 5 - Line 30; See Note 1	[c]	7,455,879	13,163,645	-	34,560	20,654,084	55.8%	48.5%	51.1%	51.1%	4,160,554	6,383,330	-	17,672	10,561,556
2017	4 See Notes 1, 2 & 5	[d]	6,272,406	11,074,177	-	-	17,346,584	55.8%	48.5%	51.1%	51.1%	3,500,149	5,370,103	-	-	8,870,252
Total	5	[e] = [a] + [b] + [c] + [d]	\$ 21,634,515	\$ 29,771,182	\$ 1,642,500	\$ 34,560	\$ 53,082,757					\$ 11,672,122	\$ 14,368,227	\$ 806,790	\$ 17,672	\$ 26,864,812
								(Cumulative Un	njust Enrichment	t					
2014	6	[f] = [a]	\$ 4,420,364	\$ 2,508,680	\$ -	\$ -	\$ 6,929,044			-		\$ 2,242,780	\$ 1,185,479	\$ -	\$ -	\$ 3,428,259
2015	7	[g] = [a] + [b]	7,906,229	5,533,360	1,642,500	-	15,082,089					4,011,420	2,614,795	806,790	-	7,433,004
2016	8	[h] = [a] + [b] + [c]	15,362,108	18,697,005	1,642,500	34,560	35,736,173					8,171,974	8,998,124	806,790	17,672	17,994,560
2017	9	[i] = [a] + [b] + [c] + [d]	\$ 21,634,515	\$ 29,771,182	\$ 1,642,500	\$ 34,560	\$ 53,082,757					\$ 11,672,122	\$ 14,368,227	\$ 806,790	\$ 17,672	\$ 26,864,812
								Unjust Enrichme	- 1-1-1 D 1-1	I4 Y-44	1 - 201	7				
2014	10 See Note 3 & 4	[i] = [a] + ([a] * 8.0% * 3.0)	\$ 5,481,251	\$ 3,110,763	\$	\$ -	\$ 8,592,015	Unjust Enrichme	nt with Prejud	igment interest a	as of July 1, 201	\$ 2,781,048	\$ 1,469,994	•	\$ -	\$ 4,251,042
2015	11 See Note 3 & 4	[k] = [b] + ([b] * 8.0% * 2.0)	4,043,604	3,508,629	1,905,300	y -	9,457,533					2,051,622	1,658,006	935,876	φ - -	4,645,504
2016	12 See Note 3 & 4	[1] = [c] + ([c] * 8.0% * 1.0)	8.052.349	14,216,736	-	37,325	22,306,411					4,493,398	6.893.996	-	19,086	11,406,481
2017	13 See Note 3, 4 & 5	[m] = [d]	6,272,406	11,074,177	-	-	17,346,584					3,500,149	5,370,103	-	-	8,870,252
Total	14	[n] = [j] + [k] + [l] + [m]	\$ 23,849,611	\$ 31,910,306	\$ 1,905,300	\$ 37,325	\$ 57,702,541					\$ 12,826,216	\$ 15,392,099	\$ 935,876	\$ 19,086	\$ 29,173,278
							Cumul	ative Unjust Enr	ichment with	Prejudgment Int	erest as of July	1, 2017				
2014	15	[o] = [j]	\$ 5,481,251			\$ -	\$ 8,592,015						\$ 1,469,994		\$ -	\$ 4,251,042
2015	16	[p] = [j] + [k]	9,524,855	6,619,392	1,905,300	=	18,049,547					4,832,669	3,128,000	935,876	=	8,896,545
2016	17	[q] = [j] + [k] + [l]	17,577,205	20,836,128	1,905,300	37,325	40,355,958					9,326,068	10,021,996	935,876	19,086	20,303,026
2017	18	[r] = [j] + [k] + [l] + [m]	\$ 23,849,611	\$ 31,910,306	\$ 1,905,300	\$ 37,325	\$ 57,702,541					\$ 12,826,216	\$ 15,392,099	\$ 935,876	\$ 19,086	\$ 29,173,278

- (1) Per the Azoxystrobin 2SC and AzoxyProp Xtra profit & loss statements for the periods of 'first sale through 2015' and 'Jan 2016-May 2016' included as the Response to Interrogatory No. 21 in the Defendants' Answers and Objections to Plaintiff's Fourth Set of Interrogatories. The Net Direct Income percentage was calculated as the Net Direct Income divided by the gross revenue for Azoxystrobin 2SC and AzoxyProp Xtra, the Net Direct Income percentage for the 'first sale through end of 2015' was utilized for 2014 and 2015, and the Net Direct Income percentage for Jan 2016-May 2016' was utilized as an estimate for the remainder of 2016 and 2017. For Azoxystrobin Technical and Tebustrobin SC, no product-specific profit & loss statement was provided. Therefore, I estimated the Net Direct Income percentage of Azoxystrobin Technical and Tebustrobin SC by utilizing the weighted average Net Direct Income percentage of Azoxystrobin 2SC and AzoxyProp Xtra for each year.
- (2) Per the Willowood USA Management Presentation, Sales and Margins by Product (WW026503), the azoxystrobin sales were projected to decline by 15.9% from 2016 to 2017. Therefore, I applied that same percentage decline to the 2016 sales (line 3 above) to estimate the product sales for 2017. However, I conservatively did not project any 2017 sales for Tebustrobin SC due to limited sales history.
- (3) Prejudgment Interest was computed through July 1, 2017 utilizing North Carolina's statutory prejudgment interest rate (8.0% simple interest; mid-year convention) (http://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByChapter/Chapter_24.pdf).
- (4) If the judgment date was December 31, 2017, 4% of each line 1-4 would be added to its corresponding lines 10-13, and the Unjust Enrichment with Prejudgment Interest of Total Willowood Azoxystrobin Sales for 2014 through 2017 would equal \$8,869,176, \$9,783,654, \$23,132,574, and \$18,040,447, respectively.
- If the judgment date was December 31, 2017, 4% of each line 1-4 would be added to its corresponding lines 10-13, and the Unjust Enrichment with Prejudgment Interest of Total Willowood Azoxystrobin Net Direct Income for 2014 through 2017 would equal \$4,388,172, \$4,805,693, \$11,828,943, and \$9,225,062, respectively.
- (5) Alternatively, if the Finder of Fact determines infringement ceased 18 months after the EPA approved the Defendants' revised labels, the Defendants' cumulative Azoxy 2SC unjust enrichment without prejudgment interest for the period July 12, 2014 through August 8, 2017 is equal to 2014 through 2016 shown above on line 4. The Defendants' cumulative AzoxyProp Xrra unjust enrichment without prejudgment interest for the period July 12, 2014 through June 10, 2017 is equal to 2014 through 2016 shown above on line 4. The Defendants' cumulative AzoxyStrobin Technical and Tebustrobin SC unjust enrichment without prejudgment interest would remain equal to 2014 through 2016 shown in lines 1 through 3. For all four products without prejudgment interest in this scenario, the cumulative unjust enrichment would be 83.7% of total damages on line 14. For all four products with prejudgment interest as of December 31, 2017 in this scenario, the cumulative unjust enrichment would be 88.0% of total damages on line 14.

			Without Prejudgment Interest							
				A	В	C	$\mathbf{D} = \mathbf{N}$	Max(A or C)	$\mathbf{E} = \mathbf{M}$	ax(A or B)
					Total Unjust	Total Unjust				
				Total Lost	Enrichment	Enrichment				
Allegation	Line	Source		Profits	Sales	Profits		Concl	usion	
		Patent Infringement								
Infringement of the '076 Patent	1	Exh. 9.a - Line 9	\$	75,663	N/A	N/A	\$	75,663	\$	75,663
Infringement of the '256 Patent	2	Exh. 9.a - Line 9		75,663	N/A	N/A		75,663		75,663
Infringement of the '138 Patent	3	Exh. 11.a - Line 9		135,522	N/A	N/A		135,522		135,522
Infringement of the '761 Patent	4	Exh. 13.a - Line 9		273,418	N/A	N/A		273,418		273,418
Infringement of All Patents	5	Exh. 13.a - Line 9	\$	273,418	N/A	N/A	\$	273,418	\$	273,418

		Copyright Infringement							
Infringement of UCO Reg. No. TX0007992684 (Quadris) - Azoxy 2SC	6	Exh. 11.a - Line 9; Exh. 15 - Line 9	\$ 135,522	\$	21,635 \$	11,672	\$	135,522 \$	135,522
Infringement of UCO Reg. No. TX0007994113 (Quilt Xcel) - AzoxyProp Xtra	7	Exh. 11.a - Line 9; Exh. 15 - Line 9	135,522		29,771	14,368		135,522	135,522
Azoxystrobin Technical	8	Exh. 11.a - Line 9; Exh. 15 - Line 9	135,522		1,643	807		135,522	135,522
Tebustrobin SC	9	Exh. 11.a - Line 9; Exh. 15 - Line 9	 135,522		35	18		135,522	135,522
Infringement of Both Registrations	10	Exh. 11.a - Line 9; Exh. 15 - Line 9	\$ 135,522	\$	53,083 \$	26,865	\$	135,522 \$	135,522
				1			-		-

Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Damages Summary by Year - Without Prejudgment Interest \$ in thousands

					Without	Prejudgment Inte	erest	
				A	В	C	D = Max(A or C)	E = Max(A or B)
Allegation	Line	Source		Cumulative Lost Profits	Cumulative Unjust Enrichment Sales	Cumulative Unjust Enrichment Profits	Concl	lusion
			Patent	Infringement				
Infringement of	f the '076 Pa	itent		8				
2014	1	Exh. 9.a - Line 6	\$	20,020	N/A	N/A	\$ 20,020	\$ 20,020
2015	2	Exh. 9.a - Line 7	Ψ	44,940	N/A	N/A	44,940	44,940
2016	3	Exh. 9.a - Line 8		60,388	N/A	N/A	60,388	60,388
2017	4	Exh. 9.a - Line 9	\$	75,663	N/A	N/A	\$ 75,663	
Infringement of	f the '256 Pa	ntent						
2014	_		Φ.	20.020	27/4	37/4	4 20.020	¢ 20.020
2014	5	Exh. 9.a - Line 6	\$	20,020	N/A	N/A	\$ 20,020	
2015	6	Exh. 9.a - Line 7		44,940	N/A	N/A	44,940	44,940
2016 2017	7 8	Exh. 9.a - Line 8 Exh. 9.a - Line 9	\$	60,388 75,663	N/A N/A	N/A N/A	60,388 \$ 75,663	60,388 \$ 75,663
Infringement of	f the '138 Pa	ntent						
Immigentent of	10010	went -						
2014	9	Exh. 11.a - Line 6	\$	33,206	N/A	N/A	\$ 33,206	\$ 33,206
2015	10	Exh. 11.a - Line 7 1		89,007	N/A	N/A	89,007	89,007
2016	11	Exh. 11.a - Line 8 1		125,018	N/A	N/A	125,018	125,018
2017	12	Exh. 11.a - Line 9 ¹	\$	135,522	N/A	N/A	\$ 135,522	\$ 135,522
Infringement of	f the '761 Pa	ntent						
2014	13	Exh. 13.a - Line 6	\$	33,206	N/A	N/A	\$ 33,206	\$ 33,206
2014	13 14	Exh. 13.a - Line 6 Exh. 13.a - Line 7	2	33,206 89,007	N/A N/A	N/A N/A	\$ 33,206 89,007	\$ 33,206 89,007
2015	14	Exh. 13.a - Line 7 Exh. 13.a - Line 8		89,007 183,627	N/A N/A	N/A N/A	89,007 183,627	183,627
2016	15 16	Exh. 13.a - Line 8 Exh. 13.a - Line 9	\$	273,418	N/A N/A	N/A N/A	\$ 273,418	

Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Damages Summary by Year - Without Prejudgment Interest \$ in thousands

			Without Prejudgment Interest										
			· · · · · · · · · · · · · · · · · · ·	A		В		()			$\mathbf{E} = \mathbf{I}$	E = Max(A or B)	
Allegation	Line	Source		Cumulative Lost Profits		Cumulative Unjust Enrichment Sales		Cumulative Unjust Enrichment Profits		Concl	usion		
			Copyrigh	nt Infringement									
Infringement of	f UCO Regis	tration No. TX0007992684 (Quadris) - Azoxy 2SC		3									
2014 2015	21 22	Exh. 11.a - Line 6; Exh. 15 - Line 6 Exh. 11.a - Line 7; Exh. 15 - Line 7 Exh. 11.a - Line 8; Exh. 15 - Line 8 Exh. 11.a - Line 9; Exh. 15 - Line 9 ² tration No. TX0007994113 (Quilt Xcel) - AzoxyProp X Exh. 11.a - Line 6; Exh. 15 - Line 6 Exh. 11.a - Line 7; Exh. 15 - Line 7	\$ \$ Ktra \$	33,206 89,007 125,018 135,522 33,206 89,007	\$ \$	4,420 7,906 15,362 21,635 2,509 5,533	\$	2,243 4,011 8,172 11,672 1,185 2,615	\$ \$	33,206 89,007 125,018 135,522 33,206 89,007	\$	33,206 89,007 125,018 135,522 33,206 89,007	
2016 2017	23 24	Exh. 11.a - Line 8; Exh. 15 - Line 8 Exh. 11.a - Line 9; Exh. 15 - Line 9 ²	\$	125,018 135,522	\$	18,697 29,771	\$	8,998 14,368	\$	125,018 135,522	\$	125,018 135,522	
Azoxystrobin To	echnical												
2014 2015 2016 2017	25 26 27 28	Exh. 11.a - Line 6; Exh. 15 - Line 6 Exh. 11.a - Line 7; Exh. 15 - Line 7 Exh. 11.a - Line 8; Exh. 15 - Line 8 Exh. 11.a - Line 9; Exh. 15 - Line 9	\$ \$	33,206 89,007 125,018 135,522	\$	1,643 1,643 1,643	\$	- 807 807 807	\$	33,206 89,007 125,018 135,522		33,206 89,007 125,018 135,522	
Tebustrobin SC	;												
2014 2015 2016 2017	29 30 31 32	Exh. 11.a - Line 6; Exh. 15 - Line 6 Exh. 11.a - Line 7; Exh. 15 - Line 7 Exh. 11.a - Line 8; Exh. 15 - Line 8 Exh. 11.a - Line 9; Exh. 15 - Line 9	\$ \$	33,206 89,007 125,018 135,522	\$	35 35	\$	- 18 18	\$	33,206 89,007 125,018 135,522		33,206 89,007 125,018 135,522	

- (1) Alternatively, if the Finder of Fact determines infringement ceased December 8, 2015 when the '138 patent expired, then the cumulative damages are equal to the 2014 damages shown above in Line 9 (or Exhibit 11.a Line 1) plus 93.7% (342 out of 365 days) of the 2015 damages shown above as the difference between Line 10 and Line 9 (or Exhibit 11.a Line 2).
- (2) Alternatively, if the Finder of Fact determines infringement ceased 18 months after the EPA approved the Defendants' revised labels, the Defendants' Azoxy 2SC unjust enrichment for the period July 12, 2014 through August 8, 2017 is equal to 2014 through 2016 shown in line 19 (or Exhibit 15 Lines 1-3), and 60.3% of 2017 unjust enrichment shown above as the difference between Line 20 and Line 19 (or Exhibit 15 Line 4). The Defendant's AzoxyProp Xtra unjust enrichment for the period July 12, 2014 through June 10, 2017 is equal to 2014 through 2016 shown above in line 23 (or Exhibit 15 Lines 1-3), and 44.1% of 2017 unjust enrichment for 2017 shown above as the difference between Line 24 and Line 23 (or Exhibit 15 Line 4). The Defendants' cumulative Azoxystrobin Technical and Tebustrobin SC unjust enrichment without prejudgment interest would remain equal to Lines 27 and 31, respectively. For all four products without prejudgment interest in this scenario, the cumulative unjust enrichment would be 83.7% of total damages, which is the sum of Lines 20, 24, 28, and 32 above (or Exhibit 15 Line 5).

			A B C D = Max(A or C) E = Max(A or B) Total Unjust Total Lost Enrichment Enrichment								
			A	_		$\mathbf{D} = 1$	Max(A or C)	$\mathbf{E} = \mathbf{M}$	ax(A or B)		
Allegation	Line	Source	Total Lost Profits				Concl	usion			
		Patent Infringement									
Infringement of the '076 Patent	1	Exh. 9.a - Line 18	\$ 85,691	N/A	N/A	\$	85,691	\$	85,691		
Infringement of the '256 Patent	2	Exh. 9.a - Line 18	85,691	N/A	N/A		85,691		85,691		
Infringement of the '138 Patent	3	Exh. 11.a - Line 18	155,301	N/A	N/A		155,301		155,301		
Infringement of the '761 Patent	4	Exh. 13.a - Line 18	297,885	N/A	N/A		297,885		297,885		
Infringement of All Patents	5	Exh. 13.a - Line 18	\$ 297,885	N/A	N/A	\$	297,885	\$	297,885		
L											

		Copyright Infringement					
Infringement of UCO Reg. No. TX0007992684 (Quadris) - Azoxy 2SC	6	Exh. 11.a - Line 9; Exh. 15 - Line 18	\$ 155,301	\$ 23,850 \$	12,826	\$ 155,301 \$	155,301
Infringement of UCO Reg. No. TX0007994113 (Quilt Xcel) - AzoxyProp Xtra	7	Exh. 11.a - Line 9; Exh. 15 - Line 18	155,301	31,910	15,392	155,301	155,301
Azoxystrobin Technical	8	Exh. 11.a - Line 9; Exh. 15 - Line 18	155,301	1,905	936	155,301	155,301
Tebustrobin SC	9	Exh. 11.a - Line 9; Exh. 15 - Line 18	155,301	 37	19	 155,301	155,301
Infringement of Both Registrations	10	Exh. 11.a - Line 9; Exh. 15 - Line 18	\$ 155,301	\$ 57,703 \$	29,173	\$ 155,301 \$	155,301

Allegation Infringement of the 2014 2015 2016 2017 Infringement of the 2014 2015 2016 2017 Infringement of the 2014 2015 2016 2017 Infringement of the 2014 2015 2016 2017				Including Prejudgment Interest ³										
Infringement of th 2014 2015 2016 2017 Infringement of th 2014 2015 2016 2017				A	В	C	D = Max(A	or C)	$\mathbf{E} = \mathbf{N}$	Tax(A or B)				
Allegation	Line	Source		Cumulative Lost Profits	Cumulative Unjust Enrichment Sales	Cumulative Unjust Enrichment Profits			lusion					
			Pate	ent Infringement										
Infringement of	the '076 Pat	ent												
2015	1 2 3	Exh. 9.a - Line 15 Exh. 9.a - Line 16 Exh. 9.a - Line 17	\$	24,825 53,732 70,416	N/A N/A N/A	N/A N/A N/A	5	4,825 3,732 0,416	\$	24,825 53,732 70,416				
	4	Exh. 9.a - Line 17 Exh. 9.a - Line 18	\$	85,691	N/A N/A	N/A N/A		5,691	\$	85,691				
Infringement of	the '256 Pat	ent												
2015	5 6	Exh. 9.a - Line 15 Exh. 9.a - Line 16	\$	24,825 53,732	N/A N/A	N/A N/A	5	4,825 3,732	\$	24,825 53,732				
	7 8	Exh. 9.a - Line 17 Exh. 9.a - Line 18	\$	70,416 85,691	N/A N/A	N/A N/A		0,416 5,691	\$	70,416 85,691				
Infringement of	the '138 Pat	ent												
2015 2016	9 10 11 12	Exh. 11.a - Line 15 Exh. 11.a - Line 16 Exh. 11.a - Line 17 Exh. 11.a - Line 18	\$ \$	41,175 105,905 144,796 155,301	N/A N/A N/A N/A	N/A N/A N/A N/A	10 14	1,175 5,905 4,796 5,301	\$	41,175 105,905 144,796 155,301				
Infringement of	the '761 Pat							,						
	13 14 15 16	Exh. 13.a - Line 15 Exh. 13.a - Line 16 Exh. 13.a - Line 17 Exh. 13.a - Line 18	\$	41,175 105,905 208,095 297,885	N/A N/A N/A N/A	N/A N/A N/A N/A	10 20	1,175 5,905 8,095 7,885	\$ \$	41,175 105,905 208,095 297,885				

						Includ	ng P	rejudgment Inte	rest 3			
				A		В		C		Max(A or C)	E =	Max(A or B)
Allegation	Line	Source		Cumulative Lost Profits		Cumulative Unjust Enrichment Sales		Cumulative Unjust Enrichment Profits		Concl		
			Copyr	ight Infringer	nent							
Infringement of	UCO Registi	ration No. TX0007992684 (Quadris) - Azoxy 28		8								
		, <u>, , , , , , , , , , , , , , , , , , </u>										
2014	17	Exh. 11.a - Line 15; Exh. 15 - Line 15	\$	41,175	\$	5,481	\$	2,781	\$	41,175	\$	41,175
2015	18	Exh. 11.a - Line 16; Exh. 15 - Line 16		105,905		9,525		4,833		105,905		105,905
2016	19	Exh. 11.a - Line 17; Exh. 15 - Line 17		144,796		17,577		9,326		144,796		144,796
2017	20	Exh. 11.a - Line 18; Exh. 15 - Line 18 ²	\$	155,301	\$	23,850	\$	12,826	\$	155,301	\$	155,301
Infringement of	UCO Regist	ration No. TX0007994113 (Quilt Xcel) - Azoxyl	Prop Xtr	a								
2014	2.1	D. 41 1: 45 D. 45 T. 45	ф	41.155	Φ.	2.111	Φ.	1 450	Φ.	41 155	Φ.	44 155
2014	21	Exh. 11.a - Line 15; Exh. 15 - Line 15	\$	41,175	\$	3,111	\$	1,470	\$,	\$	41,175
2015	22	Exh. 11.a - Line 16; Exh. 15 - Line 16		105,905		6,619		3,128		105,905		105,905
2016	23	Exh. 11.a - Line 17; Exh. 15 - Line 17	Φ.	144,796	Φ.	20,836	ф	10,022	Φ.	144,796	ф	144,796
2017	24	Exh. 11.a - Line 18; Exh. 15 - Line 18 ²	\$	155,301	\$	31,910	\$	15,392	\$	155,301	\$	155,301
Azoxystrobin Te	echnical											
2014	25	Exh. 11.a - Line 15; Exh. 15 - Line 15	\$	41,175	\$	_	\$	_	\$	41,175	\$	41,175
2015	26	Exh. 11.a - Line 16: Exh. 15 - Line 16	*	105,905	-	1,905	_	936	-	105,905	_	105,905
2016	27	Exh. 11.a - Line 17; Exh. 15 - Line 17		144,796		1,905		936		144,796		144,796
2017	28	Exh. 11.a - Line 18; Exh. 15 - Line 18	\$	155,301	\$	1,905	\$	936	\$	155,301	\$	155,301
Tebustrobin SC												
2014	29	Exh. 11.a - Line 15; Exh. 15 - Line 15	\$	41,175	\$	-	\$	-	\$	41,175	\$	41,175
2015	30	Exh. 11.a - Line 16; Exh. 15 - Line 16		105,905		-		-		105,905		105,905
2016	31	Exh. 11.a - Line 17; Exh. 15 - Line 17		144,796		37		19		144,796		144,796
2017	32	Exh. 11.a - Line 18; Exh. 15 - Line 18	\$	155,301	\$	37	\$	19	\$	155,301	\$	155,301

Syngenta Crop Protection, LLC v. Willowood, LLC, et al. Damages Summary by Year - Including Prejudgment Interest as of July 1, 2017 \$ in thousands

- (1) (a) Alternatively, if the Finder of Fact determines infringement ceased December 8, 2015 when the '138 patent expired, then the cumulative damages with prejudgment interest as of July 1, 2017 are equal to the 2014 damages shown above in Line 9 (or Exhibit 11.a - Line 10) plus 93.7% (342 out of 365 days) of the 2015 damages shown above as the difference between Line 10 and Line 9 (or Exhibit 11.a - Line 11).
 - (b) If the judgment date was December 31, 2017 for this scenario, the cumulative damages would be 103.2% of the 2014 damages shown in Line 9 (or Exhibit 11.a Line 10) and 96.9% of the 2015 damages shown above as the difference between Line 10 and Line 9 (or Exhibit 11.a - Line 11).
- (2) (a) Alternatively, if the Finder of Fact determines infringement ceased 18 months after the EPA approved the Defendants' revised labels, the Defendants' Azoxy 2SC unjust enrichment with prejudgment interest as of July 1, 2017 for the period July 12, 2014 through August 8, 2017 is equal to 2014 through 2016 shown in line 19 (or Exhibit 15 - Lines 10-12), and 60.3% of 2017 unjust enrichment shown above as the difference between Line 20 and Line 19 (or Exhibit 15 - Line 13). The Defendant's AzoxyProp Xtra unjust enrichment with prejudgment interest as of July 1, 2017 for the period July 12, 2014 through June 10, 2017 is equal to 2014 through 2016 shown above in line 23 (or Exhibit 15 - Lines 10-12), and 44.1% of 2017 unjust enrichment for 2017 shown above as the difference between Line 24 and Line 23 (or Exhibit 15 - Line 13). The Defendants' cumulative Azoxystrobin Technical and Tebustrobin SC unjust enrichment with prejudgment interest as of July 1, 2017 would remain equal to Line 27 and Line 31, respectively (or Exhibit 15 - Lines 10-12).
 - (b) For all four products with prejudgment interest as of July 1, 2017 in this scenario, the cumulative unjust enrichment would be 85.0% of total damages, which is the sum of Lines 20, 24, 28, and 32 above (or Exhibit 15 - Line 14).
 - (c) For all four products with prejudgment interest as of December 31, 2017 in this scenario, the cumulative unjust enrichment would be 88.0% of total damages, which is the sum of Lines 20, 24, 28, and 32 above (or Exhibit 15 - Line 14).
- (3) (a) For the Infringement of the '076 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 1-4) would equal \$25,625, \$55,529, \$72,831, and \$88,717, respectively (See Exhibit 9.a).
 - (b) For the Infringement of the '256 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 5-8) would equal \$25,625, \$55,529, \$72,831, and \$88,717, respectively (See Exhibit 9.a).
 - (c) For the Infringement of the '138 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 9-12) would equal \$42,504, \$109,465, \$149,797, and \$160,722, respectively (See Exhibit 11.a).
 - (d) For the Infringement of the '761 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 13-16) would equal \$42,504, \$109,465, \$215,440, and \$308,822, respectively (See Exhibit 13.a).
 - (e) For the Infringement of UCO Registration Nos. TX0007992684 and TX0007994113, if the judgment date was December 31, 2017, the cumulative Unjust Enrichment with Prejudgment Interest of Total Sales for 2014 through 2017 (lines 17-20, 21-24, 25-28, and 29-32) would equal \$8,869, \$18,653, \$41,785, and \$59,826, respectively (See Exhibit 15).
 - (f) For the Infringement of UCO Registration Nos. TX0007992684 and TX0007994113, if the judgment date was December 31, 2017, the cumulative Unjust Enrichment with Prejudgment Interest of Total Profits for 2014 through 2017 (lines 17-20, 21-24, 25-28, and 29-32) would equal \$4,388, \$9,194, \$21,023, and \$30,248, respectively (See Exhibit 15).

					Witho	ut Prejudgmen	t Inter	est		
				A	В	C	D = 1	Max(A or C)	$\mathbf{E} = \mathbf{M}$	ax(A or B)
Allegation	Line	Source		Total Lost Profits	Total Unjust Enrichment Sales	Total Unjust Enrichment Profits		Concl	usion	
P _i	atent Infringe	ment (Excluding Losses Potentially Du	e to (Cheminova)						
Infringement of the '076 Patent	1	Exh. 10.a - Line 9	\$	34,435	N/A	N/A	\$	34,435	\$	34,435
Infringement of the '256 Patent	2	Exh. 10.a - Line 9		34,435	N/A	N/A		34,435		34,435
Infringement of the '138 Patent	3	Exh. 12.a - Line 7		66,420	N/A	N/A		66,420		66,420
Infringement of the '761 Patent	4	Exh. 14.a - Line 9		130,786	N/A	N/A		130,786		130,786
Infringement of All Patents	5	Exh. 14.a - Line 9	\$	130,786	N/A	N/A	\$	130,786	\$	130,786
		Copyright Infringement								
Infringement of LICO Dec. No. TY0007002684 (Quadric) Agents 25C		Erb 12 a Line 7: Erb 15 Line 0	Φ.	66.100	\$ 21.635	\$ 11.672	•	66 120	ф	66 120

		Copyright Infringement					
Infringement of UCO Reg. No. TX0007992684 (Quadris) - Azoxy 2SC	6	Exh. 12.a - Line 7; Exh. 15 - Line 9	\$ 66,420	\$ 21,635 \$	11,672	\$ 66,420 \$	66,420
Infringement of UCO Reg. No. TX0007994113 (Quilt Xcel) - AzoxyProp Xtra	7	Exh. 12.a - Line 7; Exh. 15 - Line 9	66,420	29,771	14,368	66,420	66,420
Azoxystrobin Technical	8	Exh. 12.a - Line 7; Exh. 15 - Line 9	66,420	1,643	807	66,420	66,420
Tebustrobin SC	9	Exh. 12.a - Line 7; Exh. 15 - Line 9	 66,420	 35	18	 66,420	66,420
Infringement of Both Registrations	10	Exh. 12.a - Line 7; Exh. 15 - Line 9	\$ 66,420	\$ 53,083 \$	26,865	\$ 66,420 \$	66,420

					Without I	Prejudgment Inte	erest	
			<u> </u>	A	В	С	D = Max(A or C)	E = Max(A or B)
Allegation	Line	Source		Cumulative Lost Profits	Cumulative Unjust Enrichment Sales	Cumulative Unjust Enrichment Profits		lusion
			Patent Infringement (Excluding	Losses Potentially	Due to Cheminova)			
Infringement of	f the '076 Pa	atent		, 2000 c 0 1 000101411	240 00 00000000000000000000000000000000			
2014 2015	1 2	Exh. 10.a - Line 6 Exh. 10.a - Line 7	\$	14,118 27,959	N/A N/A	N/A N/A	\$ 14,118 27,959	27,959
2016 2017	3 4	Exh. 10.a - Line 8 Exh. 10.a - Line 9	\$	31,674 34,435	N/A N/A	N/A N/A	\$ 31,674 \$ 34,435	\$ 31,674 \$ 34,435
Infringement of	f the '256 Pa	atent						
2014 2015 2016 2017	5 6 7 8	Exh. 10.a - Line 6 Exh. 10.a - Line 7 Exh. 10.a - Line 8 Exh. 10.a - Line 9	\$ \$	14,118 27,959 31,674 34,435	N/A N/A N/A N/A	N/A N/A N/A N/A	\$ 14,118 27,959 31,674 \$ 34,435	27,959 31,674
Infringement of	f the '138 Pa	atent						
2014 2015 2016 2017	9 10 11 12	Exh. 12.a - Line 5 Exh. 12.a - Line 6 ¹ Exh. 12.a - Line 7 ¹ Exh. 12.a - Line 7 ¹	\$	23,417 55,537 66,420 66,420	N/A N/A N/A N/A	N/A N/A N/A N/A	\$ 23,417 55,537 66,420 \$ 66,420	55,537 66,420
Infringement of	f the '761 Pa	atent						
2014 2015 2016 2017	13 14 15 16	Exh. 14.a - Line 6 Exh. 14.a - Line 7 Exh. 14.a - Line 8 Exh. 14.a - Line 9	\$	23,417 55,537 100,899 130,786	N/A N/A N/A N/A	N/A N/A N/A N/A	\$ 23,417 55,537 100,899 \$ 130,786	55,537 100,899

				Without Prejudgment Interest A B C D = Max(A or C) E = Max(A									
			,	A		В		C	$\mathbf{D} = \mathbf{M}$	ax(A or C)	$\mathbf{E} = \mathbf{M}$	ax(A or B)	
Allegation	Line	Source		Cumulative Lost Profits		Cumulative Unjust Enrichment Sales		Cumulative Unjust Enrichment Profits		Concl	usion		
			Copyrigh	nt Infringement									
Infringement of	f UCO Regi	stration No. TX0007992684 (Quadris) - Azoxy 2SC	17 8	, 3 , , ,									
2014	17	Exh. 12.a - Line 5; Exh. 15 - Line 6	\$	23,417	\$	4,420	\$	2,243	\$	23,417	\$	23,417	
2015	18	Exh. 12.a - Line 6; Exh. 15 - Line 7		55,537		7,906		4,011		55,537		55,537	
2016	19	Exh. 12.a - Line 7; Exh. 15 - Line 8		66,420		15,362		8,172		66,420		66,420	
2017	20	Exh. 12.a - Line 7; Exh. 15 - Line 9 ²	\$	66,420	\$	21,635	\$	11,672	\$	66,420	\$	66,420	
Infringement of	of UCO Regi	stration No. TX0007994113 (Quilt Xcel) - AzoxyProp	Xtra										
2014	21	Exh. 12.a - Line 5; Exh. 15 - Line 6	\$	23,417	\$	2,509	\$	1,185	\$	23,417	\$	23,417	
2015	22	Exh. 12.a - Line 6; Exh. 15 - Line 7	Ψ	55,537	Ψ.	5,533	Ψ	2,615	Ψ	55,537	Ψ	55,537	
2016	23	Exh. 12.a - Line 7; Exh. 15 - Line 8		66,420		18,697		8,998		66,420		66,420	
2017	24	Exh. 12.a - Line 7; Exh. 15 - Line 9 ²	\$	66,420	\$	29,771	\$	14,368	\$	66,420	\$	66,420	
Azoxystrobin T	Technical												
2014	25	Exh. 12.a - Line 5: Exh. 15 - Line 6	\$	23,417	\$	_	\$	_	\$	23,417	\$	23,417	
2015	26	Exh. 12.a - Line 6; Exh. 15 - Line 7	Ψ	55,537	Ψ.	1,643	Ψ	807	Ψ	55,537	Ψ	55,537	
2016	27	Exh. 12.a - Line 7; Exh. 15 - Line 8		66,420		1,643		807		66,420		66,420	
2017	28	Exh. 12.a - Line 7; Exh. 15 - Line 9	\$	66,420	\$	1,643	\$	807	\$	66,420	\$	66,420	
Tebustrobin So	С												
2014	29	Exh. 12.a - Line 5: Exh. 15 - Line 6	\$	23,417	\$	_	\$	_	\$	23,417	\$	23,417	
2015	30	Exh. 12.a - Line 6; Exh. 15 - Line 7	_	55,537		_		_		55,537		55,537	
2016	31	Exh. 12.a - Line 7; Exh. 15 - Line 8		66,420		35		18		66,420		66,420	
2017	32	Exh. 12.a - Line 7; Exh. 15 - Line 9	\$	66,420	\$	35	\$	18	\$	66,420	\$	66,420	

⁽¹⁾ Alternatively, if the Finder of Fact determines infringement ceased December 8, 2015 when the '138 patent expired, then the cumulative damages are equal to the 2014 damages shown above in Line 9 (or Exhibit 12.a - Line 1) plus 93.7% (342 out of 365 days) of the 2015 damages shown above as the difference between Line 10 and Line 9 (or Exhibit 12.a - Line 2).

⁽²⁾ Alternatively, if the Finder of Fact determines infringement ceased 18 months after the EPA approved the Defendants' revised labels, the Defendants' Azoxy 2SC unjust enrichment for the period July 12, 2014 through August 8, 2017 is equal to 2014 through 2016 shown in line 19 (or Exhibit 15 - Lines 1-3), and 60.3% of 2017 unjust enrichment shown above as the difference between Line 20 and Line 19 (or Exhibit 15 - Line 4). The Defendant's AzoxyProp Xtra unjust enrichment for the period July 12, 2014 through June 10, 2017 is equal to 2014 through 2016 shown above in line 23 (or Exhibit 15 - Lines 1-3), and 44.1% of 2017 unjust enrichment for 2017 shown above as the difference between Line 24 and Line 23 (or Exhibit 15 - Line 4). The Defendants' cumulative Azoxystrobin Technical and Tebustrobin SC unjust enrichment without prejudgment interest would remain equal to Lines 27 and 31, respectively. For all four products without prejudgment interest in this scenario, the cumulative unjust enrichment would be 83.7% of total damages, which is the sum of Lines 20, 24, 28, and 32 above (or Exhibit 15 - Line 5).

				Includ	ng Prejudgmen	t Interest	
		·	A	В	C	D = Max(A or C) I	E = Max(A or B)
				Total Unjust	Total Unjust		
			Total Lost	Enrichment	Enrichment		
Allegation	Line	Source	Profits	Sales	Profits	Conclu	sion
	Patent Infringe	ement (Excluding Losses Potentially Due	to Cheminova)				
Infringement of the '076 Patent	1	Exh. 10.a - Line 18	\$ 40,335	N/A	N/A	\$ 40,335	\$ 40,335
Infringement of the '256 Patent	2	Exh. 10.a - Line 18	40,335	N/A	N/A	40,335	40,335
Infringement of the '138 Patent	3	Exh. 12.a - Line 14	78,050	N/A	N/A	78,050	78,050
Infringement of the '761 Patent	4	Exh. 14.a - Line 18	145,174	N/A	N/A	145,174	145,174
Infringement of All Patents	5	Exh. 14.a - Line 18	\$ 145,174	N/A	N/A	\$ 145,174	\$ 145,174

		Copyright Infringement					
Infringement of UCO Reg. No. TX0007992684 (Quadris) - Azoxy 2SC	6	Exh. 12.a - Line 14; Exh. 15 - Line 18	\$ 78,050	\$ 23,850 \$	12,826	\$ 78,050 \$	78,050
Infringement of UCO Reg. No. TX0007994113 (Quilt Xcel) - AzoxyProp Xtra	7	Exh. 12.a - Line 14; Exh. 15 - Line 18	78,050	31,910	15,392	78,050	78,050
Azoxystrobin Technical	8	Exh. 12.a - Line 14; Exh. 15 - Line 18	78,050	1,905	936	78,050	78,050
Tebustrobin SC	9	Exh. 12.a - Line 14; Exh. 15 - Line 18	 78,050	 37	19	 78,050	78,050
Infringement of Both Registrations	10	Exh. 12.a - Line 14; Exh. 15 - Line 18	\$ 78,050	\$ 57,703 \$	29,173	\$ 78,050 \$	78,050

Exhibit 17.d

					Including 1	Prejudgment Inte	rest ³		
			<u>-</u>	A	В	С	D = Max(A or C)	$\mathbf{E} = \mathbf{Max}(\mathbf{A} \ \mathbf{o})$	rB)
					Cumulative	Cumulative			
				Cumulative	Unjust	Unjust			
		9		Lost	Enrichment	Enrichment	~		
Allegation	Line	Source		Profits	Sales	Profits	Con	clusion	
		Patent Infringe	ment (Exclud	ling Losses Potenti	ally Due to Cheminov	va)			
Infringement of	the '076 Pate				any zac to chemino	,			
2014	1	Exh. 10.a - Line 15	\$	17,506	N/A	N/A	\$ 17,506		,506
2015	2	Exh. 10.a - Line 16		33,562	N/A	N/A	33,562		,562
2016	3	Exh. 10.a - Line 17	_	37,574	N/A	N/A	37,574		,574
2017	4	Exh. 10.a - Line 18	\$	40,335	N/A	N/A	\$ 40,335	5 \$ 40,	,335
Infringement of	the '256 Pate	ent							
2014	5	Exh. 10.a - Line 15	\$	17,506	N/A	N/A	\$ 17,506		,506
2015	6	Exh. 10.a - Line 16		33,562	N/A	N/A	33,562		,562
2016	7	Exh. 10.a - Line 17		37,574	N/A	N/A	37,574		,574
2017	8	Exh. 10.a - Line 18	\$	40,335	N/A	N/A	\$ 40,335	\$ 40,	,335
Infringement of	the '138 Pate	ent							
	_		_						
2014	9	Exh. 12.a - Line 12	\$	29,037	N/A	N/A	\$ 29,037		,037
2015	10	Exh. 12.a - Line 13 ¹		66,297	N/A	N/A	66,297		,297
2016	11	Exh. 12.a - Line 14 ¹	_	78,050	N/A	N/A	78,050		,050
2017	12	Exh. 12.a - Line 14 ¹	\$	78,050	N/A	N/A	\$ 78,050) \$ 78,	,050
Infringement of	the '761 Pat	ent							
2014	13	Exh. 14.a - Line 15	\$	29,037	N/A	N/A	\$ 29,037	y \$ 20	,037
2014	13	Exh. 14.a - Line 15 Exh. 14.a - Line 16	Ψ	66,297	N/A N/A	N/A	66,297		,037
2015	15	Exh. 14.a - Line 17		115,288	N/A	N/A	115,288		
2017	16	Exh. 14.a - Line 18	\$	145,174	N/A	N/A	\$ 145,174		

			Copyr	ight Infringer	nent							
Infringement of	UCO Regist	tration No. TX0007992684 (Quadris) - Azoxy	2SC									
2014	1.5	E 1 10 11 10 E 1 15 15	ф	20.025	ф	5 401	Φ.	2.501	Φ.	20.027	Φ.	20.025
2014	17	Exh. 12.a - Line 12; Exh. 15 - Line 15	\$	29,037	\$	5,481	\$	2,781	\$	29,037	\$	29,037
2015	18	Exh. 12.a - Line 13; Exh. 15 - Line 16		66,297		9,525		4,833		66,297		66,297
2016	19	Exh. 12.a - Line 14; Exh. 15 - Line 17		78,050		17,577		9,326		78,050		78,050
2017	20	Exh. 12.a - Line 14; Exh. 15 - Line 18 ²	\$	78,050	\$	23,850	\$	12,826	\$	78,050	\$	78,050
Infringement of	UCO Regist	tration No. TX0007994113 (Quilt Xcel) - Azoz	xyProp Xtı	a								
2014	21	Exh. 12.a - Line 12; Exh. 15 - Line 15	\$	29,037	\$	3,111	\$	1,470	\$	29,037	\$	29,037
2015	22	Exh. 12.a - Line 13; Exh. 15 - Line 16	Ψ	66,297	Ψ	6,619	Ψ	3,128	Ψ	66,297	Ψ	66,297
2016	23	Exh. 12.a - Line 14; Exh. 15 - Line 17		78,050		20,836		10,022		78,050		78,050
2017	24	Exh. 12.a - Line 14; Exh. 15 - Line 18 ²	\$	78,050	\$	31,910	\$	15,392	\$	78,050	\$	78,050
Azoxystrobin T	echnical											
2014	25	Exh. 12.a - Line 12; Exh. 15 - Line 15	\$	29,037	\$	-	\$	-	\$	29,037	\$	29,037
2015	26	Exh. 12.a - Line 13; Exh. 15 - Line 16		66,297		1,905		936		66,297		66,297
2016	27	Exh. 12.a - Line 14; Exh. 15 - Line 17		78,050		1,905		936		78,050		78,050
2017	28	Exh. 12.a - Line 14; Exh. 15 - Line 18	\$	78,050	\$	1,905	\$	936	\$	78,050	\$	78,050
Tebustrobin SC	ı,											
2014	29	Exh. 12.a - Line 12; Exh. 15 - Line 15	\$	29,037	\$	_	\$	-	\$	29,037	\$	29,037
2015	30	Exh. 12.a - Line 13; Exh. 15 - Line 16		66,297		-		-		66,297		66,297
2016	31	Exh. 12.a - Line 14; Exh. 15 - Line 17		78,050		37		19		78,050		78,050
2017	32	Exh. 12.a - Line 14; Exh. 15 - Line 18	\$	78,050	\$	37	\$	19	\$	78,050	\$	78,050

Syngenta Crop Protection, LLC v. Willowood, LLC, et al.

Exhibit 17.d

Damages Summary by Year - Including Prejudgment Interest as of July 1, 2017 and Excluding Losses Potentially Due to Cheminova \$\\$ in thousands

- (1) (a) Alternatively, if the Finder of Fact determines infringement ceased December 8, 2015 when the '138 patent expired, then the cumulative damages with prejudgment interest as of July 1, 2017 are equal to the 2014 damages shown above in Line 9 (or Exhibit 12.a Line 8) plus 93.7% (342 out of 365 days) of the 2015 damages shown above as the difference between Line 10 and Line 9 (or Exhibit 12.a Line 9).
 - (b) If the judgment date was December 31, 2017 for this scenario, the cumulative damages would be 103.2% of the 2014 damages shown in Line 9 (or Exhibit 12.a Line 8) and 96.9% of the 2015 damages shown above as the difference between Line 10 and Line 9 (or Exhibit 12.a Line 9).
- (2) (a) Alternatively, if the Finder of Fact determines infringement ceased 18 months after the EPA approved the Defendants' revised labels, the Defendants' Azoxy 2SC unjust enrichment for the period July 12, 2014 through August 8, 2017 is equal to 2014 through 2016 shown in line 19 (or Exhibit 15 Lines 10-12), and 60.3% of 2017 unjust enrichment shown above as the difference between Line 20 and Line 19 (or Exhibit 15 Line 13). The Defendant's AzoxyProp Xtra unjust enrichment for the period July 12, 2014 through June 10, 2017 is equal to 2014 through 2016 shown above in line 23 (or Exhibit 15 Lines 10-12), and 44.1% of 2017 unjust enrichment for 2017 shown above as the difference between Line 24 and Line 23 (or Exhibit 15 Line 13). The Defendants' cumulative Azoxystrobin Technical and Tebustrobin SC unjust enrichment with prejudgment interest as of July 1, 2017 would remain equal to Line 27 and Line 31, respectively (or Exhibit 15 Lines 10-12).
 - (b) For all four products with prejudgment interest as of July 1, 2017 in this scenario, the cumulative unjust enrichment would be 85.0% of total damages, which is the sum of Lines 20, 24, 28, and 32 above (or Exhibit 15 Line 14).
 - (c) For all four products with prejudgment interest as of December 31, 2017 in this scenario, the cumulative unjust enrichment would be 88.0% of total damages, which is the sum of Lines 20, 24, 28, and 32 above (or Exhibit 15 Line 14).
- (3) (a) For the Infringement of the '076 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 1-4) would equal \$18,071, \$34,680, \$38,841, and \$41,713, respectively (See Exhibit 10.a).
 - (b) For the Infringement of the '256 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 5-8) would equal \$18,071, \$34,680, \$38,841, and \$41,713, respectively (See Exhibit 10.a).
 - (c) For the Infringement of the '138 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 9-12) would equal \$29,973, \$68,518, \$80,707, and \$80,707, respectively (See Exhibit 12.a).
 - (d) For the Infringement of the '761 Patent, if the judgment date was December 31, 2017, the cumulative Lost Profits of AZ Products-at-Issue with Prejudgment Interest for 2014 through 2017 (lines 13-16) would equal \$29,973, \$68,518, \$119,324, and \$150,406, respectively (See Exhibit 14.a).
 - (e) For the Infringement of UCO Registration Nos. TX0007992684 and TX0007994113, if the judgment date was December 31, 2017, the cumulative Unjust Enrichment with Prejudgment Interest of Total Sales for 2014 through 2017 (lines 17-20, 21-24, 25-28, and 29-32) would equal \$8,869, \$18,653, \$41,785, and \$59,826, respectively (See Exhibit 15).
 - (f) For the Infringement of UCO Registration Nos. TX0007992684 and TX0007994113, if the judgment date was December 31, 2017, the cumulative Unjust Enrichment with Prejudgment Interest of Total Profits for 2014 through 2017 (lines 17-20, 21-24, 25-28, and 29-32) would equal \$4,388, \$9,194, \$21,023, and \$30,248, respectively (See Exhibit 15).